Literature After Darwin

Human Beasts in Western Fiction, 1859–1939

Virginia Richter

Palgrave Studies in
Nineteenth-Century Writing and Culture
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Literature After Darwin

Human Beasts in Western Fiction, 1859–1939

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List of Abbreviations

ACM Conan Doyle, Arthur. 'The Adventure of the Creeping Man'. 1905. *The Penguin Complete Sherlock Holmes*. Harmondsworth: Penguin, 1981. 1070–83.

BB Kipling, Rudyard. 'Bertran and Bimi'. 1891. *Life's Handicap. Being Stories of Mine Own People*. London: Macmillan, 1952. 240–59.

CA Arnold, Matthew. *Culture and Anarchy*. 1869. *The Complete Prose of Matthew Arnold*. Vol. 5. Ed. R.H. Super. Ann Arbor: The University of Michigan Press, 1965. 85–256.

CC Hatton, Joseph. *Captured by Cannibals. Some Incidents in the Life of Horace Durand*. London: Hodder and Stoughton, 1888.

CCC Carpenter, Edward. *Civilisation. Its Cause and Cure and Other Essays*. London: Swan Sonnenschein & Co, 1889.

CHS Graham, P. Anderson. *The Collapse of Homo Sapiens*. London: G.P. Putnam's Sons, 1923.

CI Clout, Machiavelli Colin [Frank Challice Constable]. *The Curse of the Intellect*. Edinburgh: William Blackwood & Sons, 1895.

CR Bulwer-Lytton, Edward. *The Coming Race*. 1871. Stroud: Alan Sutton, 1995.

DM Darwin, Charles. *The Descent of Man*. 1871. Ed. H. James Birx. New York: Prometheus Books, 1998.

EA Du Chaillu, Paul B. *Explorations and Adventures in Equatorial Africa, with Accounts of the Manners and Customs of the People, and of the Chace of the Gorilla, Crocodile, Leopard, Elephant, Hippopotamus and other Animals*. 1861. Ed. L. Stanley Jast. London: T. Werner Laurie, 1945.

GF Wells, H.G. 'The Grisly Folk'. 1921. *The Short Stories of H.G. Wells*. London: Benn, 1948. 677–92.

GM Hudson, W.H. *Green Mansions*. 1904. Ed. Ian Duncan. Oxford and New York: Oxford University Press, 1998.

HG Galton, Francis. *Hereditary Genius. An Inquiry into its Laws and Consequences*. London: Macmillan, 1869.

IDM Wells, H.G. *The Island of Doctor Moreau*. 1896. Ed. Brian Aldiss. London: Everyman/J.M. Dent, 1993.

JH Stevenson, Robert Louis. *Strange Case of Dr Jekyll and Mr Hyde*. 1886. In: *Dr Jekyll and Mr Hyde and Other Stories*. Ed. Jenni Calder. Harmondsworth: Penguin, 1979. 27–97.

KSM Haggard, Henry Rider. *King Solomon's Mines*. 1885. Ed. Dennis Butts. Oxford: Oxford University Press, 1989.

LW Conan Doyle, Arthur. *The Lost World*. 1912. Ed. Ian Duncan. Oxford: Oxford University Press, 1998.

MB Kipling, Rudyard. 'The Mark of the Beast'. 1891. *Life's Handicap. Being Stories of Mine Own People*. London: Macmillan, 1952. 240–59.

MPN Huxley, Thomas Henry. *Evidence as to Man's Place in Nature*. London: Williams and Norgate, 1863.

MRM Poe, Edgar Allen. 'The Murders in the Rue Morgue'. 1841. *Tales of Mystery and Imagination*. Ed. Graham Clarke. London and Melbourne: Dent, 1984. 411–44.

MW Collier, John. *His Monkey Wife or, Married to a Chimp*. 1930. Philadelphia: Paul Dry Books, 2000.

MZ Huxley, Thomas. 'The Method of Zadig'. 1880. *The Major Prose of Thomas Henry Huxley*. Ed. Alan P. Barr. Athens, Ga. and London: University of Georgia Press, 1997. 239–52.

OS Darwin, Charles. *The Origin of Species*. 1859. Ed. Gillian Beer. Oxford and New York: Oxford University Press, 1996.

PBL Huxley, Thomas. 'On the Physical Basis of life'. 1886. *The Major Prose of Thomas Henry Huxley*. Ed. Alan P. Barr. Athens, Ga. and London: University of Georgia Press, 1997. 174–94.

QR Westall, William. *A Queer Race: The Story of a Strange People*. London: Cassell & Company, 1887.

RA Kafka, Franz. 'A Report to an Academy'. Kafka, *The Metamorphosis and Other Stories*. Transl. Stanley Appelbaum. New York: Dover Publications, 1996. 81–8.

RT Burroughs, Edgar Rice. *The Return of Tarzan*. 1913. New York: Del Rey, 1990.

SA Waterloo, Stanley. *The Story of Ab. A Tale of the Time of the Cave Man*. 1903. New York: Arno Press, 1975.

SB	Baden-Powell, Robert. *Scouting for Boys. A Handbook for Instruction in Good Citizenship*. 1908. Ed. Elleke Boehmer. Oxford: Oxford University Press, 2004.
SU	Armstrong, Charles Wicksteed. *The Survival of the Unfittest*. London: C. W. Daniel, 1927.
TA	Burroughs, Edgar Rice. *Tarzan of the Apes*. 1912. Mineola, NY: Dover Publications, 1997.
TM	Wells, H.G. *The Time Machine*. 1895. Wells, *The Science Fiction*. Vol. 1. London: Phoenix Giant, 1995. 1–70.
TS	Hamilton, Cicely. *Theodore Savage. A Story of the Past or the Future*. London: Leonard Parsons, 1922.
VB	Darwin, Charles. *The Voyage of the Beagle*. 1839. Intr. David Quammen. Washington, DC: National Geographic Society, 2004.
VNH	Chambers, Robert. *Vestiges of the Natural History of Creation and Other Evolutionary Writings*. 1844. Ed. James A. Secord. Chicago and London: University of Chicago Press, 1994.
WW	Wells, H.G. *The War of the Worlds*. 1898. Wells, *The Science Fiction*. Vol. 1. London: Phoenix Giant, 1995. 179–319.
WN	Čapek, Karel. The *War with the Newts*. Transl. Ewald Osers. North Haven, Conn.: Catbird Press/UNESCO Publishing, 1999.
ZP	Lamarck, Jean Baptiste. *Zoological Philosophy. An Exposition with Regard to the Natural History of Animals*. 1809. Chicago and London: University of Chicago Press, 1984.

1
What Animal? Darwin's Displacement of Man

> What animal? The other.
> I often ask myself, just to see, *who I am* – and who I am (following) at the moment when, caught naked, in silence, by the gaze of an animal, for example the eyes of a cat, I have trouble, yes, a bad time overcoming my embarrassment.
> Whence this malaise?
>
> Jacques Derrida, *The Animal That Therefore I Am* (2002)[1]

> Distinct now,
> in the end we shall join you
> (how soon all corpses look alike)
> but you exhibit no signs
> of knowing that you are sentenced.
> Now, could that be why
> we upstarts are often
> jealous of your innocence,
> but never envious?
>
> W.H. Auden, 'Address to the Beasts' (1973)[2]

Darwin's heritage

We are all post-Freudians. However sceptically we may treat Freud's theories, we have become constitutionally incapable of overlooking sexual innuendo in Shakespeare's plays, of accepting parapraxes as harmless slips of the tongue, or of not recognising oedipal subtexts in interpersonal relations. In a similar way, we are all post-Darwinians.

From controversial propositions like gene selectionism (the 'selfish gene' theory) to fallacious explanations of gendered behaviour ('why women can't park a car and men can't listen'), assumptions derived from evolutionary biology form the matrix of the prevalent interpretations of the world. Evolution theory, in its sum and substance or in selected titbits, is disseminated through all the media, from TV features to Hollywood films, from weighty scientific tomes like Stephen Jay Gould's *The Structure of Evolutionary Theory* (2002) to potboilers like Jean M. Auel's *The Clan of the Cave Bear* (1980) or Greg Bear's *Darwin's Radio* (1999). The importance of evolution theory for contemporary culture manifests itself strikingly in the fact that shortly before his death, the Library of Congress named Stephen Jay Gould one of America's eighty-three Living Legends – along with the likes of Steven Spielberg, Bob Hope, Muhammed Ali and Toni Morrison.

The 'Darwin Year' 2009 – the 200th anniversary of his birth and the 150th anniversary of the publication of *On the Origin of Species* – was celebrated all over the world, not only by academic conferences, but by events targeting the general public. The Natural History Museum, London, launched the celebrations with an exhibition on Darwin's 'Big Idea', inviting its visitors to 'discover the man and the revolutionary theory that changed our understanding of the world'.[3] Exhibits ranged from 'fantastic fossils' which had inspired Darwin on the voyage of the Beagle to a first edition of the *Origin*. Other events had a similarly popular appeal: the *HMS Beagle* Project is planning to build a seagoing replica of the ship on which Darwin circumnavigated the globe, and to restage the voyage: 'International friendships and scientific alliances will form, and people the world over will follow the voyage, adventure and science aboard through the Beagle's interactive website.'[4] The University of Cambridge, Charles Darwin's *alma mater*, presented a festival (5–10 July 2009), featuring not only eminent Darwin scholars, historians of science and scientists such as Gillian Beer, Janet Browne, Richard Dawkins and Peter Bowler, but also poets and writers of fiction (among others Ian McEwan, A.S. Byatt and Ruth Padel, who is not only a poet but Darwin's great great granddaughter). The programme included lectures, debates, musical performances, film viewings and street theatre, and a major exhibition at the Fitzwilliam museum.[5] As the festival website put it, 'there was something for everyone'.[6]

Why is 'everyone' so interested in Charles Darwin and Darwinian evolution theory – much more than in other eminent nineteenth-century thinkers and scientists such as Karl Marx or, say, Charles Babbage, the father of the computer? There are several explanations, including the

conjunction of science and adventure in both Darwin's biography and his bold scientific enterprise. Darwin makes science thrilling and accessible, thereby meeting a need in an age when scientific research has become highly specialised and well-nigh incomprehensible to the uninitiated. However, there is another reason, more closely related to the actual content of Darwin's theory and its historical impact. Scientific as well as popular (including fictional) treatments of evolution still reverberate with Darwin's chief discursive act: the displacement of 'Man' from the apex of creation. After Darwin, the human being was just an animal like any other – although, admittedly, the top animal. This departure was the more surprising because it was built on a blank: Darwin barely mentioned the origin and classification of humans in *On the Origin of Species*. Nevertheless, the implicit affinity between humans and apes stood at the core of the controversies on evolution in the 1860s – and is still discussed today, newly invigorated by the input of genetics and primatology.[7] A second feature of evolution theory continues to be equally disturbing as well as thought-provoking: Darwin's denial of teleology. Humans, those upstart beasts, are no longer the final aim of natural history – not to mention a divine plan – but the contingent products of natural selection.

Darwinism thus continues to press upon us the question with which Darwin confronted, almost unwillingly, his contemporaries: the question of 'Man's place in nature'. Closely related are the questions how nature and the human realm of culture are connected and what place humans, the only animals with the capacity to create complex interpretations of the world, grant themselves in relation to non-human animals, their own evolutionary past and the future of their species. These are the questions explored in novels written in the wake of Darwinian evolution, and forming the subject of this book. My approach to these fictions is historical and contextualist, situating them in relation to evolutionary, anthropological and colonial debates; however, it is also 'actualist', to borrow Charles Lyell's term: I am interested in the continuing resonance of Darwinism in contemporary culture and theory formation. Critical readings of literary and non-fiction texts are therefore embedded in a theoretical framework that addresses questions of otherness, diversity and normativity (e.g. the concept of 'biopolitics' proposed by Michel Foucault and developed further by Giorgio Agamben) without always acknowledging its genealogical links to Darwinism.

Two major studies have carved out the territory of literary Darwin studies in the 1980s: Gillian Beer's *Darwin's Plots* (1983) and George Levine's *Darwin and the Novelists* (1988).[8] Whereas Beer analyses

narrative and aesthetic patterns in Darwin's own language, and the engagement of writers such as George Eliot and Thomas Hardy with evolution theory, Levine shows how Darwinian principles – such as randomness and gradualism – influenced the novels of writers who did not explicitly concern themselves with scientific ideas, as for instance Charles Dickens and Anthony Trollope. Both books were landmark studies at the time, espousing Darwin for literary criticism, and initiating an interest in science within literary and cultural studies. My book builds on Beer's and Levine's insights, yet it is both more specific in focus – dedicating itself to the analysis of literary representations of human–animal relations and the fears sparked by this suddenly precarious relationship – and wider in scope, moving beyond Victorian literature to include modernist fiction. Up to now, there is no study which compares the treatment of Darwinism in late nineteenth literature with modernist representations in the early twentieth century; consequently, the substantial revaluation of issues such as degeneration and 'simianation' ('becoming ape') in modernism has not received sufficient critical attention. In addition, my book includes 'high' and 'popular' fiction and thereby shows the continuity as well as the diversification in the literary reception of Darwinism. Literary works that are already familiar in the context of Darwinian debates, such as Edward Bulwer-Lytton's *The Coming Race* (1871), H. G. Wells's *The Island of Dr Moreau* (1896) or Arthur Conan Doyle's *The Lost World* (1912), will be placed in relation to a large number of sorely neglected fictions, e.g. Joseph Hatton's *Captured by Cannibals* (1888), Stanley Waterloo's *The Story of Ab. A Tale of the Time of the Cave Man* (1903), Cicely Hamilton's *Theodore Savage. A Story of the Past or the Future* (1922) and P. Anderson Graham's *The Collapse of Homo Sapiens* (1923). Some of these have been out of print since their first publication, and are here receiving critical attention for the very first time.

My aim in bringing together such a wide range of literary narratives is to throw light on the complex ways such writings, addressed to the general reader rather than the specialist, engage with and feed back into the evolutionary and anthropological debates following Darwin's publication of the *On the Origin of Species*. Figurations like the missing link, the ape-man and primeval man travel between the fields of popular culture and science, and contribute to constituting a collective imaginary in which fundamental anthropological questions of identity and 'species anxiety' are negotiated. The broad historical framework of my study, beginning – after a survey of (proto-)evolutionary debates from Lamarck to Darwin – with fictions written in the direct aftermath of Darwin's 'bombshell' of 1859,

and ending with novels published between the two World Wars and imbued with the racial, eugenicist and political debates of that period, has been adopted to show how Darwinism continued to affect cultural practices and discourses well beyond its immediate context – Victorian science – and in a period in which Darwin's brand of evolution theory had ceased to be the primary point of reference in reflections about the human status. My study thus fulfils one of the claims for 'literary Darwinizing' postulated by George Levine: literary studies of Darwin should show 'how the theory, multiply interpreted, has had its cultural consequences' and how language and ideas interplay with cultural practice.[9]

After 2009, nobody can claim that literary Darwinism is an under-researched field. Since Beer's and Levine's pioneering efforts, various monographs studying Darwin's influence on individual authors have appeared in print.[10] More comprehensive studies have placed Darwin in the context of Victorian culture,[11] colonialism,[12] or have focused on the strategic deployment of aesthetic and moral issues, e.g. respectability, in the debates on science and culture.[13] Taken together, these publications have brought forth a revised image of Darwin as a figure firmly embedded in the culture of his times, whose ideas were disseminated and contested not only in scientific publications but also in literary texts and visual artefacts. Indeed, as David Amigoni has argued, science on the one hand and culture, literature and art on the other hand cannot be juxtaposed as clearly differentiated discursive formations: '"literature" became a widely embracing practice because, first, publication opportunities were constantly expanding, which prompted a continuous re-assessment of the relationship between writers as intellectual producers and their audiences; and, secondly, as the evolutionary aesthetics of Grant Allen and others would show, "science" in the public domain was made of symbolic material, and thus always already literary'.[14] For a long time now, Darwinism and related discourses have moved beyond the confines of the history of science and form an exemplary field of interdisciplinary exchange to which literary and cultural studies continue to make significant contributions.

My own study is part of this interdisciplinary field. Methodologically, it combines a contextualist approach with an attention to questions of genre, narratological and rhetorical aspects and the texture of language. It is thus situated closer to Beer's and Levine's 'school' than to neo-naturalist approaches represented, for example, by Joseph Carroll. The presupposition of Carroll's brand of literary Darwinism is that innate human dispositions – the products of natural selection – influence to a high degree all cultural activities, and moreover, that they are

unchanging. The 'Darwinian paradigm' is regarded as normative, as the only true one. Approaches that do not fit into this paradigm, such as poststructuralist constructivism, are rejected as incoherent, empirically unfounded and plainly misguided.[15] In contradistinction to this approach, I would like to maintain that as an epistemological framework, Darwinism favours unpredictability and asystematicity rather than the endless repetition of the same universal pattern, and is therefore not necessarily hostile to poststructuralist approaches.[16] If Carroll's axiomatic assumption that nature is the foundation for all cultural activity leads to the conclusion that all literary texts reflect this unvarying nature – that all novels are about sexual selection – then the aesthetic distinctiveness and historicity of literature is completely lost. While I want to explore patterns, connections and genealogical lines in the literature after Darwin, it is also one of my aims to pay due respect to the individual specimens, to the aesthetic singularity of literary texts.

Anthropological anxiety

The issues raised by evolution theory, in particular the question of 'Man's place in nature' and his biological closeness to animals, continue to bother us, albeit in a fundamentally different way. What Darwin's supporter Thomas Henry Huxley has called the 'question of questions for mankind – the problem which underlies all others, and is more deeply interesting than any other', namely, 'the ascertainment of the place which Man occupies in nature and of his relations to the universe of things',[17] has recently been rephrased by the Italian philosopher Giorgio Agamben as 'the very question of man':

> In our culture, man has always been thought of as the articulation and conjunction of a body and a soul, of a living thing and a *logos*, of a natural (or animal) element and a supernatural or social or divine element. We must learn instead to think of man as what results from the incongruity of these two elements, and investigate not the metaphysical mystery of conjunction, but rather the practical and political mystery of separation. What is man, if he is always the place – and, at the same time, the result – of ceaseless divisions and caesurae? It is more urgent to work on these divisions, to ask in what way – within man – has man been separated from non-man, and the animal from the human, than it is to take on the great issues, on so-called human rights and values.[18]

What is more threatening – the thought of man's separation from or conjunction with animals? For us, at the beginning of the twenty-first century, possibly separation – a sense of an irremediable loss of 'nature' in a completely technologised, quantified, and surveyed world – is the more pressing concern, a concern expressed in a large number of publications on biotechnology,[19] on the status of animals in our society,[20] or on the ethical consequences of the division of *zoē*, 'the simple fact of living common to all living beings', from *bios*, 'the form or way of living proper to an individual or a group'.[21] Giorgio Agamben claims that a concept of human rights – ultimately based on the 'good life' of traditional humanism which excludes those who participate only in *zoē*, not in the *bios* of the political community – has become obsolete. The insecurity about human rights, whether it takes the form of a demand for their extension to the Great Apes[22] or a demand for their relativisation (as a 'Western' concept), can be regarded as a symptom of the more fundamental anxiety about biological existence and technology, about the repudiation of the animal that results paradoxically in a blurring of the human, the animal and the machine. New technologies like prenatal diagnostics and genetic testing, as well as the possibilities of prolonging – or ending – life in the face of severe, terminal illness, give a new urgency to the question where 'life' begins and ends. Genetic experiments that change the very structure of the organism – such as the 'Oncomouse' – or the technology of cloning mammals – the sheep Dolly – raise the question of the specificity and uniqueness of 'the human'.

Like Agamben and, in his late writings, Jacques Derrida, most intellectuals today question the idea of a clear division between the human and the animal. For Darwin's contemporaries, on the contrary, it was rather the idea of conjunction – the claim that all living beings, including man, were descended from the same primitive species – that was deeply disturbing. Collectively they recoiled from the theory of evolution by natural selection, mainly for two reasons: first, because man's singular status as a superior being, lifted above his animal nature by his reason, was fundamentally called into question, since even reason and the other higher faculties were no longer considered the unique, divine gift of man; secondly, because man's dominant position was not the result of a divine plan or even the necessary outcome of natural laws, but the contingent result of a rather messy trial-and-error procedure. In consequence, man's status in nature was no longer secure, and even the belief in the basic stability of the individual body – subject only to the changes wrought by age and illness – became undermined. Fears of degeneration, of individual reversions to a more primitive or even

animal level, and of the large-scale breakdown of civilisation, proliferated both in general debates and in fictional writings.

I will call this pervasive sense of a fundamental category crisis 'anthropological anxiety'. The term does not refer to the then emergent discipline of anthropology, although the growing interest in 'primitive' cultures in the Victorian era is connected to the problem of the human status. Rather, I employ the term 'anthropological' in the sense of a cultural definition of 'the human' based on an attempt to separate the *anthropos* from the non-human, the animal, the mechanical. Positive definitions of the human – a being endowed with reason, a being with an immortal soul, a being capable of speech – were always problematic; they had to be supported by negative definitions, the delimitation against groups identified as non-human or less-than-human. These mechanisms of separation became extremely precarious after Darwin's intervention. Darwinism constituted an important catalyst for the expression of fears concerning the definition of the human, but it was by no means the sole factor. Anthropological anxiety was also fuelled by social changes brought about by the industrial revolution and by the contact with other cultures and peoples through trade and colonisation. It formed a ubiquitous theme in the literature of the period, from naturalist novels in which the proletariat was described in animal terms – e.g. in George Gissing's *Demos* (1886) – to the imperial Gothics written by Henry Rider Haggard in which Africans were depicted as a repulsive blend of supernatural and animal characteristics, exemplified in the witch Gagool in *King Solomon's Mines* (1885).

In the reception of Darwinian evolution theory, the current that places the emphasis on its normative aspects – beginning with Herbert Spencer's 'survival of the fittest', resolving the inherent tautology into 'the survival of the best' – has been the most conspicuous. At its worst, Darwinism has been associated with Galtonian eugenics; terms like 'Favoured Races', the 'Struggle for Life' and 'Selection' have acquired, through the experiences with racist and eugenicist politics in the twentieth century, a distinctly bitter taste. But, as Gillian Beer has emphasised, Darwin's theory is far from privileging normativity. Perpetual change, not the maintaining of the status quo, governs the evolutionary process – a process that is open, destination unknown:

> *Deviance* not conformity, *difference* from the parent type not likeness to it, expand the occupation of ecological niches available and the exploration of fresh ones. Profusion and diversity are the two essential population principles for evolutionary process. Nature in

> this new understanding is always perched on the brink of the monstrous and *needs to be so*: what seems the monster may well be simply a new type 'waiting' for the right conditions to thrive, and in its turn become the frequent (the norm in its non-judgemental sense).[23]

Read this way, Darwinism opens up a way to an analysis aiming at strengthening the differential against the normative aspect. In recent years, Darwin has been rediscovered as a radical thinker whose concepts can be opposed against what Agamben has called the 'total management of biological life'.[24] Beer aligns Darwin with a political project that emerges at a historical moment when human beings are in danger of finally being transformed into anthropological machines, when the triumph of economy and the total normalisation of the human *and* the animal body go hand in hand. At this point in history, we can rediscover Darwin's idea 'that diversity, difference, nonconformity, otherness, are creative forms – diversity is *the* creative medium and abundance of difference essential to survival'.[25] It is the intellectual's task to resist normativity and to espouse the cause of creativity and diversity. In this field, the life sciences and literary and cultural studies meet, or should meet.[26] By reading literary texts against the matrix of evolution theory, I hope to contribute to a debate that is no less vital to us than the controversy about man's place in nature was to Darwin's contemporaries. At stake are our views on humanity, on our relations to animals and on life itself – the very foundations of all ethical action. I would like to claim that literary and cultural studies have a crucial share in the question of questions of our time.

The principle of evolution is dynamic: forms change and develop into other forms. In the optimistic Victorian interpretation of evolution theory, this plasticity of biological entities is linked to the idea of progress: simple organisms develop into more complex ones, molluscs become fish, fish become mammals, and finally man emerges to crown the history of life. But this trajectory can be reversed. The close biological affiliation of bodies means that each organism retains the memory of its past. This link with evolutionary history can take two forms: recapitulaton and reversion. The theory of recapitulation, propounded by the German comparative embryologist and follower of Darwin, Ernst Haeckel, maintains that each individual organism in the embryonic state repeats and leaves behind earlier stages passed through by its species: for instance, mammalian embryos develop gill slits as a 'memento' of the times when mammals had been fish. Haeckel's 'biogenetic law', in brief, affirms that ontogeny – the development of the individual – is

the short and rapid recapitulation of phylogeny – the development of the species. However, this recapitulation is condensed, i.e. during its own rapid development an embryo repeats only the most important changes in the long history of the species.[27] Reversion, on the other hand, is the singular reappearance of traits which had been left behind during evolutionary development. Whereas recapitulation is a part of the regular development of all members of a species, reversion is an irregular occurrence happening only to a few individuals. Atavisms, i.e. features or abilities no longer needed for survival, every trace of which had supposedly been obliterated, suddenly reappear without apparent reason. This sudden reversion, for instance the reappearance of a simian muscular structure in a human body, is cited by Darwin as a proof of common descent: 'if man is descended from some ape-like creature, no valid reason can be assigned why certain muscles should not suddenly reappear after an interval of many thousand generations'.[28]

The fundamental assumptions that organic forms are not truly fixed, that one form blends into another, and in particular, that extinct features can resurface, constitute the grounds for the various forms of anthropological anxiety. The most basic of these forms is the fear of regression or degeneration.[29] If extinct traits, such as the mobility of the ear muscles, hirsuteness or pronounced canine teeth, can reappear, pointing back to past stages of development, why shouldn't the complete relapse of an individual, or even an entire society, be possible as well? In Darwin's view, such reversions can happen; mentally deficient people, for instance, are often explained as the result of a return to an earlier developmental stage:

> Their skulls [of 'microcephalous idiots'] are smaller, and the convolutions of the brain are less complex than in normal men. The frontal sinus, or the projection over the eyebrows, is largely developed, and the jaws are prognathous to an '*effrayant*' degree; so that these idiots somewhat resemble the lower types of mankind. Their intelligence, and most of their mental faculties, are extremely feeble. They cannot acquire the power of speech, and are wholly incapable of prolonged attention, but are much given to imitation. They are strong and remarkably active, continually gambolling and jumping about, and making grimaces. They often ascend stairs on all-fours: and are curiously fond of climbing up furniture or trees. We are thus reminded of the delight shown by almost all boys in climbing trees; and this again reminds us how lambs and kids, originally alpine animals, delight to frisk on any hillock, however small. Idiots also resemble the lower

> animals in some other respects; thus several cases are recorded of their carefully smelling every mouthful of food before eating it. One idiot is described as often using his mouth in aid of his hands, whilst hunting for lice. They are often filthy in their habits, and have no sense of decency; and several cases have been published of their bodies being remarkably hairy. (DM 36–7)

It is significant how several distinct 'earlier stages' are here collapsed into one: the 'idiots' resemble 'primitive' people, infants and animals. Their ability to imitate ('to ape'), their great physical activity and their delight in climbing link them to animals; their atavistic hirsuteness can point to early men, apes or to animals in general. Their 'bad manners', lack of shame and filthiness are traits commonly ascribed to 'savages', but also to the English lower classes who are, in the discourse on degeneration, often construed as the 'Other' within Western civilisation. In the case of 'microcephalic idiots' single individuals are thus seen as reversions to an earlier evolutionary stage. In the widely disseminated sociological and medical discourses on degeneration, the idea of regression was applied to whole societies.[30] A particular variety of this discourse was Cesare Lombroso's theory of the 'born criminal' as an atavism. According to Lombroso, a person's congenital disposition to crime showed in his or her physical structure – the overall shape of the head and body, but also individual features like the shape of the ears, teeth and hands. Like Darwin, Lombroso connected the atavistic criminal to other figurations of alterity: 'Lombroso argued that the criminal was linked by his abnormal anatomy and physiology to the insane person and the epileptic, as well as to those other "Others" who were constituted as the objects of the human sciences: apes, children, women, prehistoric humans, and contemporary "savages".'[31]

The belief in continued human progress is consequently undermined from the very beginning by an attendant fear, implied in the ambiguity of the very term 'descent': the fear of regression, of sliding back on the evolutionary ladder. The second half of the nineteenth century abounds with medical, sociological and aesthetic texts on the threat of degeneration: from the French physician Bénédict Augustin Morel's *Traité des dégénérences physiques, intellectuelles et morales de l'espèce humaine* (1857) and Lombrosos's theory of born criminals as regressive types – *L'uomo delinquente* (1876) – to Edwin Ray Lankaster's *Degeneration. A Chapter in Darwinism* (1880), explaining degeneration as the adaptation to less complex conditions of life – e.g. among the working class – and finally to Max Nordau's *Entartung* (1892), dedicated to Lombroso and published in Britain in 1895 as *Degeneration*.

Nordau's neologism *Entartung* – which, ironically, since Nordau was a Jew, became the anti-modernist catchphrase of the Nazis – linked the supposedly depleted aesthetics of fin-de-siècle art to the debilitating conditions of modern life. Degeneration, in Nordau's definition, which in turn refers back to Morel and Lombroso, consists in 'the fact that the degenerate organism has not the power to mount to the height of evolution already attained by the species, but stops on the way at an earlier or later point'.[32] This form of reversion manifests itself first of all in physical stigmata – 'gaps in development, malformations and infirmities'[33] – which, though acquired through the abuse of drugs and alcohol or through illness (in particular, syphilis) can be hereditarily transmitted; Nordau is a Lamarckian, not a Darwinian. However, the new degenerate 'species' is not fully viable but 'fortunately, is soon rendered sterile, and after a few generations often dies out before it reaches the lowest grade of organic degradation'.[34] Despite this built-in check on the hereditary dissemination of degeneracy, it is, in Nordau's view, a terrible threat to modern society, in particular since he extends the concept to the mental sphere. Fin-de-siècle artists and writers are tainted by 'intellectual stigmata' which they can transmit not only to their biological descendants but to any recipient of their works. This danger is so much the greater as the modern way of life – in particular residence in large towns – predisposes the population to degeneracy and saps their vital powers.[35] The degenerate's incapacity to adapt – an evolutionary logjam – is likely to be a cause of the extinction of the species. Degeneration thus forms a lethal threat not only to individuals, but to entire societies and, finally, to humankind. Such pessimistic interpretations of the possibilities inherent in evolution provided a counterpoint to the Huxleyan narrative of progress.

The British physician Edwin Ray Lankaster, an adherent of Darwin's theory, also links the possibility of degeneration to the conditions of modern life. Lankaster distinguishes between three different effects of evolution on the organism: 'to keep it *in statu quo*; to increase the complexity of its structure; or lastly, to diminish the complexity of its structure'.[36] Degeneration, the loss of complexity, is caused by a lack of challenge, for animals, if food is too easily obtained, in human societies, like that of ancient Rome, if general wealth produces indolence. This law of evolution is, according to Lankaster, equally applicable to modern European society:

> With regard to ourselves, the white races of Europe, the possibility of degeneration seems to be worth some consideration. In accordance with a tacit assumption of universal progress – an unreasoning

> optimism – we are accustomed to regard ourselves as necessarily progressing, as necessarily having arrived at a higher and more elaborate condition than that which our ancestors reached, and as destined to progress still further. On the other hand, it is well to remember that we are subject to the general laws of evolution, and are as likely to degenerate as to progress. As compared with the immediate forefathers of our civilisation – the ancient Greeks – we do not appear to have improved so far as our bodily structure is concerned, nor assuredly so far as some of our mental capacities are concerned.[37]

Instead of predicting a continued progress, Lankaster and others who apply evolution theory to human society warn of a possible turn toward mental and physical regression. This possibility forms the basis for the negotiations of anthropological anxiety in fiction. This anxiety always concerns in some way an uncertainty about boundaries. Boundaries can be blurred in two directions, namely in the temporal and the spatial dimension: anthropological anxiety can take the form of a return to the past, or of a merging together of two existing forms.

Kelly Hurley has pointed out that the loosening of the morphic structure, the plasticity of the body suggested by Darwinism, created a space for new constructions of the 'ab-human', a concept of human identity as 'bodily ambiguated or otherwise discontinuous'.[38] This change in the representation of identity was treated in Victorian Gothic fiction which welded scientific issues to the supernatural tradition: 'evolution theory described a bodily metamorphosis which, even though taking place over aeons and over multiple bodies, rendered the identity of the human body in a most basic sense – its distinctness from ''the brute beasts'' – unstable'.[39] In consequence, Victorian Gothic novels represented the evolutionary process as reversible. Anthropological anxiety gained, however, an even greater urgency when linked to racial and colonial discourses: the increasing possibilities of intercultural contact provided by Britain's geographical explorations, commercial ventures and political and administrative involvement across the globe created the space for different scenarios of anxiety. These ranged from a realistic fear of miscegenation to fantastic notions that the greater spiritual force of the 'mystic East' would be able to overpower and transform the Western body, as in Kipling's 'Mark of the Beast' (1891). British colonialism thus provided an indispensable background for the spatial dimension of anthropological anxiety, while Darwinian evolution theory formed the matrix for its temporal dimension. However, the two can often hardly be separated: in colonial discourse, the temporal axis

is projected onto the geographical axis, i.e. contemporary 'primitive peoples' are seen as living in the evolutionary past – a notion designated by Anne McClintock as 'anachronistic space'.[40]

The anxieties permeating British society in the second half of the nineteenth century were not limited to the insecurity about man's biological status, but often, as Susan Bernstein has argued, a more general uneasiness about borders in the cultural realm was linked metaphorically or metonymically to the new developments in biology. Bernstein connects the literary category crisis produced by the emergence of a new genre, the sensation novel, with the fears of biological boundary confusion. Darwin's theory functioned as a cultural symptom focusing a hitherto diffuse sense of anxiety about the identity of human beings: 'Darwin's evolutionary theory along with the species question are not the origins of this anxiety, but rather they constitute a cultural event that helped to define it.'[41] Bernstein distinguishes two aspects of 'ape anxiety': an 'anxiety of assimilation', i.e. 'distress over the fusing of divisions', and an 'anxiety of simianation', i.e. 'discomfort over evolutionary ties between humans and other primate species'.[42]

In my analysis of fiction after Darwin, I use this distinction to mark out two different areas constituted by the diffusion of categories. On the one hand, I link the disquiet concerned with the collapse of divisions, the anxiety of assimilation, to the encounter with the 'Other' in the British imperial enterprise, the fear of 'going native'. The anxiety of assimilation is thus concerned with a spatial possibility of de-differentiation – the blurring of the divide between the European self and the exotic Other – that is explored in imperial fictions depicting the encounter between European explorers and the simultaneously fascinating and repellant colonised peoples. In other words, the anxiety of assimilation goes beyond the possibility of cultural adaptation to the fear of literally *becoming* the despised/desired Other – the whole racial, biological and cultural identity of the white coloniser is at stake.

The anxiety of simianation, on the other hand, involves a loss of difference in time, a return to a former evolutionary stage, cast as the – physical or mental – assumption of ape-like qualities. Obviously, the idea of simianation as regression entails a departure from scientific accuracy: apes are not really man's ancestors; rather both are descended from the same 'ape-like progenitor'. But in the novels treated here, for example the *Tarzan* series, developments from an ape-like to a human stage, or back from man to ape, are presented as moves up and down the evolutionary ladder. In fact, in the figure of Tarzan, Haeckel's biogenetic law is personified. Due to its simultaneous resemblance to and difference

from man, the ape became the central image for the general dissolution of boundaries, both in scientific debates and in literature, and for the epistemological change wrought by Darwinian evolutionism.

Following an overview of the controversies surrounding evolution theory and an examination of the evolutionary go-between, the 'missing link', which played a crucial role in the negotiations of the human–animal boundary (Chapter 2), I begin my literary analyses with a study of the anxiety of simianation in 'ape narratives' (Chapter 3). The ape, representing the precariousness of human self-definition, serves as the most concrete and tangible aspect of anthropological anxiety. I then proceed to analyse the anxiety of assimilation in imperial fiction (Chapter 4). In the colonial contact zone, the fear of assimilation is linked to the ambivalence of colonial desire.[43] The breakdown of difference can result in the joy of regression – the colonial hero embraces the 'savage within' with pleasure and relief – yet it can also lead to a re-affirmation of boundaries, which may result in the extermination of the missing link, as in Conan Doyle's *Lost World*. Chapter 5 connects anxiety about cultural degeneration with the wider issue of cultural pessimism that was intensified in the last decade of the nineteenth century, and once more after the First World War.

Throughout, my focus is on British and, occasionally, American fictional and non-fictional texts, published between the 1860s – absorbing the impact of Darwinism – and the inter-war decades, when the interest in evolutionary topics veered off in the disastrous direction of eugenics and racial exterminism. However, occasionally I consider it pertinent to look at texts generated in different cultural contexts if they provide a specific new angle angle or if they impact on the British debates. This holds true particularly for the final chapter in which I broaden the perspective onto the European scene for several reasons. First, the English novels discussed here are concerned with the emergence of a European super-race, respectively with the decline and defence of European culture. Secondly, 'cultural pessimism' is a European, and above all a German, phenomenon; it would be impossible to pursue its links with Darwinism without including the interventions made by Oswald Spengler and Sigmund Freud. Thirdly – and this is the most sensitive issue – there are connections between Darwinism and the lethal biopolitics of the twentieth century. While I wish to resist any simplified historical trajectories suggesting that 'Darwin led to Hitler', questions of racial inequality and eugenics arise repeatedly in the primary sources themselves, often in reference to a 'vulgarised' notion of the 'survival of the fittest'. These unsavoury affinities cannot be simply ignored. I have

found an antidote to this abuse of Darwinism in a novel that deserves to be much better known in the English-speaking world: Karel Čapek's *War with the Newts* (1936). This Czech science fiction novel takes up many of the themes addressed so far, such as the devaluation of animals and life in general, the antagonism of species and the apocalyptic scenarios of cultural pessimism, and subjects them to a highly ironic deconstruction via modernist narrative techniques. This novel thus can serve as a perfect counterpoint to my preceding analyses of anthropological anxiety.

2
Creating Connections: Humans, Apes and Missing Links

I am almost convinced (quite contrary to opinion I started with) that species are not (it is like confessing a murder) immutable. Heaven forfend me from Lamarck nonsense of a 'tendency to progression', 'adaptations from the slow willing of animals', etc.! But the conclusions I am led to are not widely different from his; though the means of change are wholly so. I think I have found out (here's presumption!) the simple way by which species become exquisitely adapted to various ends.

Charles Darwin, *Letter to Joseph Hooker* (1844)[1]

By the theory of natural selection all living species have been connected with the parent-species of each genus, by differences not greater than we see between the varieties of the same species at the present day; and these parent-species, now generally extinct, have in their turn been similarly connected with more ancient species; and so on backwards, always converging to the common ancestor of each great class. So that the number of intermediate and transitional links, between all living and extinct species, must have been inconceivably great. But assuredly, if this theory be true, such have lived upon this earth.

Charles Darwin, *On the Origin of Species* (1859)[2]

The rise of evolution theory

Darwin's cataclysm

By the year AD820.701, humankind will have evolved into two distinct species: ethereal, childish, androgynous beings and ape-like, nocturnal cannibals who feed on their co-descendants from a common ancestor. Some millions of years later, the only remaining life form on earth will be a gigantic crab, soon to be extinct by the approaching burn-out of the sun. These two end-of-time scenarios in H.G. Wells's *Time Machine* (1895) epitomize 'anthropological anxiety': an insecurity about the continuity of man's dominant status in the natural world, a new awareness of the precariousness, indeed the dissolution of the demarcation line between humans and animals, a growing fear about humankind's future which could no longer be imagined as a never-ending upward progression. Scientific postulates like Darwin's evolution theory and William Thomson's (the later Lord Kelvin's) Second Law of Thermodynamics accorded to man only a relatively humble role in the natural order and in the universe. Darwin claimed that all living species, certainly all mammals including *Homo sapiens*, were descended from a common ancestor; Thomson's calculations limited the remaining lifespan of the sun – and consequently, life on earth – to five or six million years.[3] Both the past and the future of humankind were accordingly less glorious than the traditional theological narrative suggested: a slow descent from amoebas instead of a special creation in God's image, a slow expiration in entropy instead of the more dramatic resurrection and the Last Judgement – humankind had its beginnings in slime and would go out with a whimper. In particular Darwin's insistence on the lack of direction of the evolutionary process, his rejection of teleology, ran against the grain of the story told in the Bible (*Gen.* 1.24) and retold by Milton in *Paradise Lost* (1667, 2nd edn 1674), in which man constituted the culmination and ultimate purpose of God's creation:

> 'Let us make now man in our image, man
> In our similitude, and tell them rule
> Over the fish and fowl of sea and air,
> Beast of the field, and over all the earth,
> And every creeping thing that creeps the ground.'
> This said, he formed thee, Adam, thee O man
> Dust of the ground, and in thy nostrils breathed
> The breath of life; in his own image he

> Created thee, in the image of God
> Express, and thou became'st a living soul.
> Male he created thee, but thy consort
> Female for race; then blessed mankind, and said,
> 'Be fruitful, multiply, and fill the earth,
> Subdue it, and throughout dominion hold
> Over fish of the sea, and fowl of the air,
> And every living thing that moves on the earth.'[4]

Milton's poem celebrates man's special relationship with God, and consequently, his privileged position in nature. However, as Hans G. Kippenberg[5] has pointed out, *Paradise Lost*, which accompanied Darwin on his voyage around the world, also suggested the idea of a superabundant nature: 'The Earth [...] / Op'ning her fertile Woomb teemed at Birth / Innumerous living Creatures.'[6] This ancient notion of a life-giving nature – Spinoza's *natura naturans* – contributed to Darwin's concept of natural selection which first of all presupposes an overproduction of organisms. In many respects, Darwin's theory did not constitute an absolute discontinuation of older discourses on nature. On the contrary, as studies such as Gillian Beer's *Darwin's Plots* and Janet Browne's magisterial two-volume biography show, Darwin was firmly embedded not only in the tradition of empirical science, but also in the literary and philosophical tradition of his country. Paradoxically, the model of evolution proposed in *On the Origin of Species* was the logical outcome of a very long accumulation of evolutionary ideas and of reflections on the human–animal relationship, and simultaneously a radical break with traditional thinking – at least, this is how the publication of the *Origin* was received by many contemporaries: as a bombshell shattering old certainties.

After Darwin, human ascendency over nature was compromised: not only was man, 'the co-descendant with other mammals of some unknown and lower form' (DM 152), no longer created 'in the image of God / Express' and appointed by Him as ruler over 'every living thing that moves on the earth', as Milton suggests. The whole idea of an ulterior purpose behind natural history was undermined by Darwin's notion of natural selection acting at random. Man turned out to be the product of chance, not of design. The implications of evolution theory led to a deep-seated and pervasive sense of crisis in British intellectual and literary circles, and beyond. Famously, Sigmund Freud included Darwin's theory, with Copernicus' heliocentrism, in a row of mortifications inflicted on man's self-love, culminating in his own displacement of the rational Ego.[7]

Freud insists on the revolutionary impact of Darwin's theory which went beyond a paradigmatic change in the scientific community of the late nineteenth century. The consequences of Darwinism unsettled everybody's idea of self, just as did those of Freud's own psychoanalytic theory. Before Freud, Friedrich Nietzsche saw the 'animalisation' of man as the result of a history of continued shrinking, of self-diminution that had been initiated by Copernicus. However, Nietzsche, Darwin's most important mediator and interpretor in Germany outside the disciplinary confines of biology, gave the Darwinian animalisation of man an idiosyncratic twist: civilised man is in truth a captive animal, 'this animal which is to be "tamed", which rubs himself raw on the bars of his cage, this deprived man consumed with homesickness for the desert, who had no choice but to transform himself into an adventure, a place of torture, an uncertain and dangerous wilderness'.[8] The only escape for this captive and 'sick' animal is to embrace its animality, to stop loving the cage, to become a free and cruel beast of prey. These reactions to Darwin can only indicate the extent of his impact and the variety of responses.

Although the feeling of a revolutionary change was shared by Darwin's supporters and opponents alike, a view of Darwinian evolution theory as a complete break with preceding scientific and philosophical practices would be historically imprecise. The exact distinction between humans and animals was always a matter of contention. Even in Milton's description of the creation, the reference to the 'Dust of the ground' from which Adam was formed points to the material nature of man: through his body and his senses man was in Christian theology always tied to the animal realm. This is precisely the traditional predicament of man: to be positioned *between* the physical and the spiritual world, to be drawn simultaneously in both directions. As Pope put it in the *Essay on Man*: 'Now upward will he soar, / And little less than angel, would be more; / Now looking downwards, just as griev'd appears / To want the strength of bulls, the fur of bears.'[9] As an animal, man is imperfect, weak, and vulnerable; as a rational being he has just enough insight to reflect upon his imperfections, not to overcome them. Man's central position is one of vexation rather than glory.[10]

Lamarck's *Philosophie zoologique*

Before the late eighteenth century, there existed a host of theories explaining the genesis of life, but no 'evolution' theories in the proper sense – evolution defined as the accumulation of small changes (variations) in a specific organism over a long period which result in a

completely new organic form clearly distinguishable from the original one.[11] Evolution consists of two distinct processes: transformation, i.e. the development of new species in time (contemporary man developed from a hominid ancestor), and speciation, i.e. the division of a single form into several separate ones (the common ancestor of all primates evolved into the different species man, chimpanzee, gorilla, orang-outang etc.). In this precise sense, evolution theory was a latecomer on the stage of scientific debates.

The specific feature of evolution theory which distinguishes it from earlier figurations of natural history is its dynamic, temporal nature. Aristotle's arrangement of all living beings on a continuous chain, for instance, is a static model which precludes change and development. As Arthur O. Lovejoy has stressed, the chain of being belongs to a different register from later visual representations of the natural order such as the evolutionary 'scale' or 'tree': 'The Chain of Being [...] was a perfect example of an absolutely rigid and static scheme of things.'[12] By contrast, the chief characteristic of the evolutionary 'tree' is its dynamic nature, the fact that a species can be upwardly or downwardly mobile, can progress or regress.[13] The two metaphors, the chain of being and the evolutionary tree, reflect the respective social systems to which they belong: feudal society and bourgeois capitalism. With the advent of modern biology, the static classificatory system of natural history was projected onto a temporal axis, allowing the emergence of notions of development and progress.[14]

According to Junker and Hoßfeld, the first consistent evolutionary statement is to be found in Buffon's *Histoire Naturelle* (1753): in the article 'L'âne' ('The Ass') Buffon assumes only a few original 'creations' from which the higher organisms derive in all their diversity. However, Buffon finally retracts the idea of evolution because it contradicts the biblical account.[15] Other eighteenth-century philosophers like Diderot or Charles Darwin's grandfather Erasmus[16] incorporated speculations on evolution in their writings. As early as 1749, Diderot proposed in his *Lettre sur les aveugles* (*Letter on the Blind*) the inconstancy of species, i.e. the possibility that only perfectly adapted species survive while others become extinct. Diderot pursued the idea of unstable, changing organisms, of a 'perpetual flux', in his dialogue *Le rêve de d'Alembert* (*D'Alembert's Dream*, 1769), and more systematically in his methodological treatise *De l'interprétation de la nature* (*On the Interpretation of Nature*, 1753). In the latter work, he sketches the possible development of man from a mass of matter to a fully encultured being with language, laws, arts and sciences – and his subsequent dissolution, his return to matter.

However, Diderot's speculation is a far cry from a systematic theory of evolution. He suggests neither a mechanism of transformation, nor speciation, nor the possibility of genealogical connections between different species. The first full-fledged evolution theory has to await the advent of the nineteenth century.

Jean-Baptiste de Lamarck is the first to postulate a genuine theory of the transformation of species by natural means. The principal mechanisms are an inherent tendency of the organism towards ever greater complexity, and its ability to respond to changes of the environment. Acquired characteristics – the long neck of a giraffe, in the most famous example illustrating Lamarckian evolution theory, is the result of its adaptation to living conditions in the barren and arid interior of Africa[17] – are then inherited by the next generation. Consequently, in Lamarck's model the stress is put on environmental changes to which the organism adapts. In the Darwinian model, the emphasis lies on the random variability of the organism; some giraffes just happen to have longer necks, thus heightening their chances of survival and reproduction under adverse environmental conditions. Lamarck expressed his views on evolution first in his lectures at the *Musée d'Histoire Naturelle* (at which he was Professor for Invertebrates) in 1800, and published his theory in his most famous book *Philosophie Zoologique* (*Philosophical Zoology*, 1809). Although it was hotly debated and Lamarck's long-term influence was considerable, the opponents of evolutionism, in France particularly the eminent comparative anatomist Georges Cuvier, carried the day.[18]

Lamarck's language reveals his ambivalent position between a classical system of representation which arranged knowledge in static tableaux, and a newly mobilised disposition of knowledge characteristic of science in the nineteenth century.[19] He combines the image of a finely graded chain with the possibility of development: 'How could I avoid the conclusion that nature had *successively produced* the different bodies endowed with life, from the simplest worm upwards? For in ascending the animal scale, starting from the most imperfect animals, organisation gradually increases in complexity in an extremely remarkable manner.'[20] Lamarck assumes that the 'conditions necessary to the existence of life are all present in the lowest organisations' (ZP 2). More complex forms of life arise from this basic structure. So far, he is quite in agreement with late eighteenth-century natural history. However, Lamarck's decisive move consists in the mobilisation of the tableaux, in the shift from the chain of being to a dynamic 'animal scale', and consequently, from natural history to biology, a term Lamarck himself coined: 'It became

therefore of importance to know how this organisation, by some sort of change, had succeeded in giving rise to others less simple, and indeed to the gradually increasing complexity observed throughout the animal scale' (ZP 2). The progressive increase in complexity is explained by two principles operative in the organism: first, the continued use of an organ leads to its development, while permanent disuse causes the organ to deteriorate and disappear; secondly, fluids modify the cellular tissue in which they move, open passages in them, and thus create entirely new organs.[21] Under the pressure of changes in the environment, these two principles work their changes on the organism.

Lamarck's system presupposes a *deus absconditus*: the idea of creation has become abstract, shifting from the separate forming of every single animal to the setting-up of general laws allowing the progressive emergence of new species. Nevertheless, the underlying notion of a harmonious nature is still sustained by a God who – although he does not directly interfere in natural processes – in principle still guarantees the completeness of creation, and therefore the ultimate stability of the world. Consequently, the possibility of extinction is highly problematic. Lamarck proposes two conceivable explanations for the seeming 'loss' of animals: either they are 'hiding' in 'parts of the earth's surface to which we have never penetrated' or in 'the various parts of the sea-bottom' (ZP 44), or they have been transformed beyond recognition. The observation of gradual change in the morphologies of organisms leads to the assumption of evolution: 'Evolution of outward form, with consequent preservation of lineages from extinction, represents the only alternative to termination of lineages followed by creation of new and different morphologies',[22] a position held by Cuvier.

Lamarck's proposition that species are unstable was disturbing enough to provoke harsh criticism by scientists in the first half of the nineteenth century.[23] However, it lacked some of the even more radical components of Darwin's theory, in particular the idea of a *common* descent of all species and the rejection of teleology. According to Lamarck, simple organisms modified in separate lines of development into more complex forms of the same organism; his notion of evolution was based on the idea of addition rather than on deviation.[24] The question that would form the centre of the Darwinian controversy, man's 'descent from apes', was therefore absent from the debates following Lamarck's lectures on evolution and the publication of the *Philosophie zoologique*. Lamarck also retained the idea of a harmonious balance of nature expressed in adaptive changes. His emphasis lies on the positive implications of evolution: successful adaptation, growth, increasing perfection.

On the other hand, Lamarck addressed the question of man's descent with more daring than Darwin did in *On the Origin of Species*. Lamarck imagined that in response to environmental changes, one group of quadrumanous animals could have lost the habit of climbing trees and acquired the habit to use their feet only for walking; next, these animals would adopt the habit of standing upright, and give up using their jaws as weapons:

> Let us now suppose that a quadrumanous race, say the most perfect, acquired through constant habit among all its individuals the conformation just described, and the faculty of standing and walking upright, and that ultimately it gained the supremacy over the other races of animals, we can then easily conceive:
>
> 1. That this race having obtained the mastery over others through the higher perfection of its faculties will take possession of all parts of the earth's surface, that are suitable to it;
> 2. That it will drive out the other higher races, which might dispute with it the fruits of the earth, and that it would compel them to take refuge in localities which it does not occupy itself;
> 3. That it will have a bad effect on the multiplication of allied races, and will keep them exiled in woods or other deserted localities, that it will thus arrest the progress of their faculties towards perfection; whereas being able itself to spread everywhere, to multiply without obstacle from other races and to live in large troops, it will create successively new wants, which will stimulate its skill and gradually perfect its powers and faculties;
> 4. Finally, that this predominant race, having acquired an absolute supremacy over all the rest, will ultimately establish a difference between itself and the most perfect animals, and indeed will leave them far behind. (ZP 170–1)

This is an astonishingly far-reaching fantasy not only about man's rise out of the animal kingdom, but about his supremacy on earth. It differs from the Darwinian account in several respects: there is no competition within the group itself, i.e. Lamarck simply assumes that all individual members would adopt to environmental changes in the same way. Conversely, the struggle with other species is quite direct; rival groups are 'driven out' and 'compelled' to accept the inferior conditions that further restrict their development, whereas in a Darwinian model the competition for the same living space would be decided by better adaptation.

Possibly the most astounding aspect of Lamarck's speculative history of man is the explanation of the higher faculties, in particular speech, by the workings of evolution. The upward progress of the dominant species would result in an increased need for communication; consequently, a greater number and variety of signs necessary for communication would have to be developed; finally, speech would emerge, and, through geographical diversification, different languages would develop. In so far, the account of human evolution is consistently materialist. However, Lamarck contains the transgressivity of his reflections by pointing to the special status of man which exempts him, or at least his non-physical aspects, from the materialist predicament of other creatures: 'Such are the reflections which might be aroused, if man were distinguished from animals only by his organisation, and if his origin were not different from theirs' (ZP 173). – In the end, man remains God's special creation.

With the formulation of his ideas on transformation, Lamarck inaugurated what virtually became the 'century of evolution'. Both as a positive source of inspiration (for Spencer) and as a negative model (for Darwin), Lamarck's writing constituted a watershed between the proto-evolutionary thinking of the eighteenth century and the comprehensive elaboration of evolution as an initially contested, but later irresistible principle of modern biology. Although misunderstood by many contemporaries and later overshadowed by Darwin's success, Lamarck's speculative proposition constitutes a crucial moment for the intellectual milieu out of which Darwin's theory emerged.

From Chambers' *Vestiges* to Darwin's *On the Origin of Species*

In England, then as now wary of continental theories, Lamarck's evolutionary model was received sceptically. The British scene was dominated by natural theology: its main proponents, Archdeacon Paley (*Natural Theology*, 1802) and the authors of the 'Bridgewater Treatises',[25] maintained that the evidences of divinity were directly discernible in the natural world. However, the theological arguments began to pale as the discrepancies between scientific observations – e.g. on the age of the earth – and the biblical account became insurmountable. The developments in many fields of the natural sciences, in particular geology, prepared the ground for the Darwinian revolution. Charles Lyell postulated three geological principles without which the formation of a viable model of evolution would not have been possible: actualism, uniformitarianism and a steady-state view of the earth. These principles constitute Lyell's attempt to explain

past geological phenomena 'in terms of causes now operating' and 'not only in terms of causes of the same *kind* now operating but also in terms of causes of the same *degree*'.[26] In contrast to the then current catastrophism – which held that in the past, the earth had been repeatedly transformed by large-scale cataclysms – Lyell 'believed the earth was in a perpetual cycle of eruption and decay, where all periods were essentially similar. There is no sign of any direction or progression in either the organic or the inorganic world.'[27] Darwin's principle of natural selection is also 'actualist' and 'uniformitarian', i.e. the forces responsible for the development of species are still operating on organisms today. Additionally, it is not *a priori* directional, although the development of complex organisms was interpreted by most commentators as a 'rise', with men at the apex of biological development. The long-term accumulation of small changes which results in new species presupposes the large time-frame postulated by Lyell's model of geology.[28] But the biological consequences they drew from the same principles were diametrically opposed: Darwin's mentor rejected the transmutation of species.

Towards the middle of the century, it gradually became impossible to ignore the 'question of questions' about human descent. It was squarely addressed by the anonymous author (posthumously identified as Robert Chambers) of *Vestiges of the Natural History of Creation* (1844). Chambers argued that the fossil record suggests a progression from simple organisms to Mammalia, in which 'the creation of our own species is a comparatively recent event',[29] i.e. the emergence of humankind postdated the first appearance of other species considerably. The greatest difference between Chambers's hypothesis and the theory Darwin was working on simultaneously consists in the former's endorsement of teleology. Chambers proposed a progressivist and predetermined model of evolution: directed by divine law, each species develops from '*the simplest and most primitive type* […] *to the type next above it* […] *and so on to the very highest*' (VNH 222). All species move in unison towards a perfected stage so that, once *Homo sapiens* will have evolved into the superhuman beings of the future, chimpanzees will be able to occupy the vacated place. What Chambers suggests is, in fact, less a theory of evolution than a 'law of organic development', prearranged by an Almighty Intelligence (VNH 223). The symmetry and harmony Chambers sees in nature are evidence that this 'must needs have been devised and arranged for beforehand' like 'the laying out of an old-fashioned garden!' (VNH 232) Consequently, Chambers is not so much a precursor of Darwinism than of Intelligent Design.

The reception of the *Vestiges* was overwhelmingly hostile. Chambers's hypotheses received a battering from leading scientists such as the Woodwardian Professor of Geology, Adam Sedgwick. The book had made itself vulnerable to criticism by speculating on the existence of human life on other planets, the artificial creation of life and a fast-forward model of evolutionary progress across genera, namely that favourable living conditions might prompt a leap, in three generations, from *Aves* to *Mammalia* via the stages goose, ornithorynchus and rat (VNH 219). Despite such forays into the borderlands of science fiction, *Vestiges* constituted an important intervention in the scientific debates of the 1840s and 'created a space for debate about natural law, setting the stage for the controversy over Darwin's *Origin* – a book that in many ways presented its arguments as a response to what Chambers had done'.[30]

What remained missing in speculations on evolution was a convincing explanation of the actual mechanism producing these vast changes. The originality of Darwin's contribution consists in hitting upon such a device: the principle of 'natural selection'. The history of Darwin's discovery and elaboration of this concept is well known: during his participation in the circumnavigation of the globe on board *HMS Beagle* (1831–6), Darwin collected an immense amount of material concerning the animal populations on the different continents. In particular the very singular fauna found in South America and the Galapagos Islands would prove illuminating. However, the decisive spark which led to the conception of natural selection as the means of species modification came from Darwin's perusal, in 1838, of Malthus's *Essay on the Principle of Population* (1798).[31] Darwin transferred Malthus's postulate that populations would grow exponentially if not held back by natural checks – above all, the limited supply of food – from society to the natural realm. In *On the Origin of Species*, Darwin describes the principle in the following way:

> As many more individuals of each species are born than can possibly survive; and as, consequently, there is a frequently recurring struggle for existence, it follows that any being, if it vary however slightly in any manner profitable to itself, under the complex and sometimes varying conditions of life, will have a better chance of surviving, and thus be *naturally selected*. From the strong principle of inheritance, any selected variety will tend to propagate its new and modified form.[32]

But it took a long time before Darwin went public with his theory which existed, in a fairly complete form, from at least 1844. He hesitated to

publish a work that would, as he clearly foresaw – forewarned by the fracas created by *Vestiges* – clash violently with the orthodox convictions of the scientific establishment as well as the beliefs of society in general. Darwin spent the next fourteen years engaged in research on Cirripedia (barnacles) and the accumulation of material on the breeding of domestic animals, particularly pigeons. In this period, he established himself as one of Britain's leading zoologists. The work on his 'big book', which was intended to propound his theory and include the immense mass of material he had assembled, was suddenly interrupted by a letter from the naturalist Alfred Russel Wallace. Wallace, doing field research in Malaysia, had arrived at the same explanation for the diversity of species as Darwin. In this delicate situation, Darwin's friends, the geologist Charles Lyell and the botanist Joseph Hooker, arranged for Wallace's essay, which had been enclosed with his letter, and excerpts from Darwin's manuscripts and letters to be read jointly at a meeting of the Linnean Society on 1 July 1858. Darwin and Wallace were thus both established as the co-authors of the principle of natural selection.[33]

Wallace's theory was indeed strikingly similar to Darwin's; the main difference consisted in his more consistent rejection of the Lamarckian inheritance of acquired characteristics, which Darwin admitted as an – albeit subordinate – factor in evolution. Like Darwin, Wallace was influenced by Malthus, and he even came up with the identical phrase 'a struggle for existence' to describe the workings of natural selection:

> It appears evident, therefore, that so long as a country remains physically unchanged, the numbers of its animal population cannot materially increase. If one species does so, some others requiring the same kind of food must diminish in proportion. The numbers that die annually must be immense; and as the individual existence of each animal depends upon itself, those that die must be the weakest – the very young, the aged, and the diseased – while those that prolong their existence can only be the most perfect in health and vigour – those who are best able to obtain food regularly, and avoid their numerous enemies. It is, as we commenced by remarking, 'a struggle for existence', in which the weakest and least perfectly organized must always succumb.[34]

Following the public presentation of his ideas and the publication of the material in the proceedings of the Linnean Society, Darwin abandoned the 'big book' and produced a text he considered a preliminary 'sketch': *On the Origin of Species By Means of Natural Selection, or the Preservation*

of Favoured Races in the Struggle for Life, published in November 1859. In this work, Darwin not only explained his theory, but presented an impressive array of facts to support it.[35] However, Darwin himself was well aware that the chain of evidence was not complete. Two central elements were missing: a satisfactory explanation of the mechanism of inheritance, and actual proof that intermediate forms existed connecting the different related species. Although the solution for the first problem was close at hand – Gregor Mendel published the principles of genetics in 1866 – it only became widely known in 1900. In the case of the second deficiency, Darwin pleaded the incompleteness of the fossil record.[36] Darwin was careful to keep himself in line with the British empirical tradition – avoiding Chambers's speculations – and to remain silent on the most controversial aspect of his theory, its consequences for man's position in nature. Nevertheless, he made emphatically clear his break with the traditional model of organic life, in particular its theological basis:

> Although much remains obscure, and will long remain obscure, I can entertain no doubt, after the most deliberate study and dispassionate judgement 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. Furthermore, I am convinced that Natural Selection has been the main but not exclusive means of modification. (OS 7)

If people could live with the idea that animals had not been created as independent species, but were descended from a small group or even a single common ancestor, this proved much harder to accept in the case of *Homo sapiens*. In particular the possibility that man's mind could be the result of natural processes, that his immortal soul might not be God's gift to the being crowning His creation, constituted a radical threat to the religious beliefs of Victorian society.[37] Darwin was anxious to downplay this radical implication of his work. Man is conspicuous by his absence in Darwin's argument; only on the last pages is he mentioned almost in passing, in the greatest understatement of the century: 'Light will be thrown on the origin of man and his history' (OS 394). Despite this reticence, the descent of man was perceived in the debates

following the publication of *On the Origin of Species* as the question of questions opened up by evolution theory.

Darwin's question of questions

The controversy on Man

On the Origin of Species was an immediate success – 3800 copies were sold in the first twelve months – but the reception was extremely controversial. Some scientists, like Thomas Henry Huxley, accepted Darwin's proposition from the very beginning,[38] some rejected it initially but were finally convinced, like Charles Lyell whose scepticism held out till 1863, and some remained hostile, like Britain's foremost comparative anatomist Richard Owen.[39] However, the debates were not confined to specialists. The public took a great interest in the controversy which was conducted in journals addressed to the general reader.[40] One of the most committed adversaries of Darwin was Samuel Wilberforce, the Bishop of Oxford. In his review of the *Origin*, Wilberforce started by accepting 'natural selection' if it was interpreted as a power of improvement, not of alteration of types: 'That such a struggle for life then actually exists, and that it tends continually to lead the strong to exterminate the weak, we readily admit; and in this law we see a merciful provision against the deterioration, in a world apt to deteriorate, of the works of the Creator's hands.'[41] But in what followed, Wilberforce attacked Darwin's approach as methodologically unsound, disputed the validity of the arguments drawn from domestic breeding, and finally addressed the crux, the application of natural selection to humankind:

> Now, we must say at once, and openly, that such a notion is absolutely incompatible not only with single expressions in the word of God on that subject of natural science with which it is not immediately concerned, but, which in our judgement is of far more importance, with the whole representation of that moral and spiritual condition of man which is his proper subject-matter. Man's derived supremacy over the earth; man's power of articulate speech; man's gift of reason; man's free-will and responsibility; man's fall and man's redemption; the incarnation of the Eternal Son; the indwelling of the Eternal Spirit, – all are equally and utterly irreconcilable with the degrading notion of the brute origin of him who was created in the image of God, and redeemed by the Eternal Son assuming to himself his nature. Equally inconsistent, too, not with any passing

> expressions, but with the whole scheme of God's dealings with man as recorded in His word, is Mr. Darwin's daring notion of man's further development into some unknown extent of powers, and shape, and size, through natural selection acting through that long vista of ages which he casts mistily over the earth upon the most favoured individuals of his species.[42]

Wilberforce here articulates the very feeling of dissolution of the existent order, of spiritual upheaval and insecurity about man's identity that I call 'anthropological anxiety'. Darwin not only destroys the basis of Christian beliefs, he calls into question 'man's supremacy over the earth' which is directly derived from Adam's divine instalment as master over nature and confirmed by the qualities peculiar to man: speech, reason and free will, the traditional difference markers separating humans from animals. From being a well-ordered system, with God as first cause underwriting its order, after Darwin's intervention nature becomes chaotic and, indeed, marvellous. The final aim of God's plan is replaced by an open ending. Rather than taking such a reading of nature as a sign of Darwin's modernity, Wilberforce, in the name of a realist epistemology, condemns it as a relapse into magical thinking.

Maybe it is not entirely wrong to connect Darwin with the sense of wonder at the miracles of nature that pervades natural philosophy in late medieval bestiaries. As George Levine has recently argued, Darwin's theory, though radically secular, can be read as a model for 'nontheistic enchantment': Darwin offered a 'dizzying vision of endless time, of staggering complexity, of interdependence and paradox, that replaces the "enchantment" that a divinely constructed nature has been said to produce'.[43] However, Darwin also belongs most emphatically to the long British tradition of fact-gathering which culminated in nineteenth-century positivism. The marvellous changes wrought in nature are precisely not explained by miracles, but by carefully considered theories based on facts and observations. As Darwin's biographer Grant Allen was able to conclude five years after Darwin's death, and twenty-six years after the first publication of *On the Origin of Species*, the victory of evolution theory was a foregone conclusion thanks to its thorough founding in the empirical tradition. Readers were convinced or simply overwhelmed by the sheer mass of fact. But although Darwin's theory was soon widely accepted as accurate, the collective sense of dislocation ran deep. Allen compares this general feeling of shock to the sudden eruption of a volcano, a 'hidden revolutionary force which had been gathering head and energy for so many years unseen within the bowels

of the earth'; Darwin's readers 'felt the solid ground of dogmatic security bodily giving way beneath their feet, and knew not where to turn in their extremity for support'.[44]

Yet it was not only the theory of evolution as such nor the mechanism of natural selection that galvanized the contemporary public, but the point almost passed over by Darwin yet astutely picked out by Bishop Wilberforce: man's final inclusion in the natural realm, not only in his physical dimension – that wouldn't have been particularly new – but also in his mental and spiritual capacity. The derivation of all that made man special – language, reason, morality, religious feeling – from natural selection produced a category crisis that went beyond simple narcissistic mortification:

> Vast as was the revolution effected in biology by the 'Origin of Species,' it was as nothing compared with the still wider, deeper, and more subtly-working revolution inaugurated by the announcement of man's purely animal origin. The main discovery, strange to say, affected a single branch of thought alone; the minor corollary drawn from it to a single species has already affected, and is destined in the future still more profoundly to affect, every possible sphere of human energy. Not only has it completely reversed our entire conception of history generally, by teaching us that man has slowly risen from a very low and humble beginning, but it has also revolutionised our whole ideas of our own position and our own destiny, it has permeated the sciences of language and of medicine, it has introduced new conceptions of ethics and of religion, and it threatens in the future to produce immense effects upon the theory and practice of education, of politics, and of economic and social science.[45]

This formulation shows that anthropological anxiety was not restricted to religious uncertainty, but was experienced as a general paradigm change affecting all areas of intellectual life. Darwin's evolution theory constituted in fact a 'scientific revolution' in the sense of Thomas Kuhn: it provided a new model solution for the 'anomaly' – the question of the transmutation of species – which had vexed 'normal science' in the first half of the nineteenth century. Darwin's theory fulfils the conditions of a paradigm in Kuhn's definition: 'Paradigms gain their status because they are more successful than their competitors in solving a few problems that the group of practitioners has come to recognise as acute. To be more successful is not, however, to be either completely successful with a single problem or notably successful with any large number.'[46]

Darwin offered a better solution than others, but he left many problems unsolved, consequently opening a new field for scientific debate. Simultaneously, however, his theory was not absolutely incompatible with what Kuhn calls 'normal science', i.e. the established scientific institutions and practices. As Stephen Jay Gould has emphasised, it was possible to incorporate 'the new explanations without substantially altering [...] scientific practices': 'Systematists, for example, could easily explain homology by common evolutionary descent rather than similarity of divine thought; yet the procedures for recognizing homologies and constructing classifications from them were little disturbed by this explanatory reversal.'[47] Peter Bowler corroborates the estimate that, although the transition from a static to a dynamic world view connected with evolution constituted 'a major conceptual revolution',[48] the initial impact of Darwinism was limited and some of the most radical aspects of his thinking were appreciated only belatedly.

Despite some persisting continuities in scientific practice, Darwin's contemporaries shared a sense of crisis, a feeling that a profound epistemological revolution was taking place. In *Man's Place in Nature*, Thomas Henry Huxley specified the central core of anxiety, recasting it as the greatest challenge of the age:

> The question of questions for mankind – the problem which underlies all others, and is more deeply interesting than any other – is the ascertainment of the place which Man occupies in nature and of his relations to the universe of things. Whence our race has come; what are the limits of our power over nature, and of nature's power over us; to what goal we are tending; are the problems which present themselves anew and with undiminished interest to every man born into the world. (MPN 57)

The profound change concerning man's position in nature was discussed in connection to his kinship with other primates. The always problematic relation between man and his distorted mirror image, the ape, received an entirely new virulence in the wake of Darwin's blow against man's self-esteem.

Apes and savages in the debate on evolution

As Huxley's book title indicates, man's place was now *in* nature; he was no longer, as in the Baconian conception of science, a master–observer *outside* nature. The precise demarcation line separating man from animals and in particular from his closest 'co-descendants', the apes,

became a contested space. Accordingly, Huxley begins his inquiry with a detailed description of the cultural role apes assumed in the Western tradition, in particular in two kinds of discourses: the discourse of geographical exploration, i.e. travel reports, and the discourse of scientific discovery, i.e. anatomical treatises like Tyson's *Homo Troglodytes, sive Orang-outang* (1699). In both discourses, which intersect at many points, apes are conceived as border figures negotiating the metaphorical space between sameness and alterity.

Quasi-mythical reports of man-like apes, like 'the Ape Monster Pongo' mentioned in *Purchas his Pilgrimes* (1625), provide Huxley with the historical framework for his inquiry: the true nature of the great apes – human, brutish, or monstrous – was always undecided in Western scientific discourse, including modern taxonomy. After all, Linnaeus had classified the orang-outang as *Homo nocturnus* in the *Systema naturae* of 1758. Contemporary travel reports, in particular those describing the most mysterious of apes, the gorilla, continued this tradition by emphasising its anthropomorphic appearance. One of the first modern reports not based on the descriptions of native informants but on the traveller's own observations was the Franco-American Paul B. Du Chaillu's *Explorations and Adventures in Equatorial Africa*, published just two years before Huxley's treatise. Du Chaillu dwells at length on the human-like qualities of the gorilla, its erect gait and fiendish but still almost human gaze: 'As they ran – on their hind legs – they looked fearfully like hairy men; their heads down, their bodies inclined forward, their whole appearance like men running for their lives.'[49] For the hunter and collector, the similarity between humans and apes raises severe ethical problems concerning 'fratricide' and 'cannibalism'. Du Chaillu feels 'almost like a murderer' (EA 60) as he shoots his first gorilla, while the eating habits of the Africans make him decidedly queasy, although necessity forces him to adopt them as well: 'though I generally abominate monkey, which roasted, looks too much like roast-baby, I was now at that point of semi-starvation when I should have very much delighted in a tender bit even of gorilla' (EA 56). The encounter with the giant ape is doubly uncanny, because the 'something human in its discordance' (EA 60) which characterises the gorilla evokes the dread of simultaneous identity and difference, and because the extreme conditions of the gorilla hunt push Du Chaillu beyond the limits of civilisation, marked by his readiness to eat the human-like flesh. But this possibility, masked as necessity, of crossing the ultimate limit of humanity – in the sense of civilised, humane moral behaviour – constitutes precisely the ambivalent attraction of the encounter: killing and eating

the man-like ape is a 'permitted transgression' – it is almost like murder, but after all, it is just a hunt; it is almost cannibalism, but not quite. Du Chaillu can, literally, have his ape and eat it. He acknowledges that this ambiguity of colonial desire contributes to making the gorilla hunt the ultimate challenge: 'It is this lurking reminiscence of humanity, indeed, which makes one of the chief ingredients of the hunter's excitement in his attack of the gorilla' (EA 352).

Du Chaillu's gorilla bears all the marks of a 'missing link' connecting man to animals, while screening the European traveller from this undesirable connection. This function is further strengthened by the racial discourse that infuses the travel report:

> The face of this gorilla was intensely black. The vast chest, which proved his great power, was bare, and covered with a parchment-like skin. Its body was covered with grey hair. Though there are sufficient points of diversity between this animal and man, I never kill one without having a sickening realization of the horrid human likeness of the beast. This was particularly the case today, when the animal approached us in its fierce way, walking on its hind legs, and facing us as few animals dare face a man. (EA 277)

The blackness of the gorilla is stressed throughout the text. The animal is thus closely connected to the black inhabitants of Equatorial Africa who in fact serve as a kind of buffer between the white man and the ape. However, it is a characteristic of the missing link to subvert such protective shields. As Du Chaillu captures an albino monkey, the African hunters turn the joke on him: 'Look! he got straight hair, all same as you. See white face of your cousin from the bush! He is nearer to you than gorilla is to us' (EA 284). Having emphasised the metaphoric closeness of the gorilla with humans, and black natives in particular, Du Chaillu retreats to the safer position of asserting the absolute difference between man and ape. He specifically includes non-Europeans (the 'lower races') in the family of man and stresses the chasm that separates them from apes: 'The difference of size of brain or cranial capacity between the highest ape and the lowest man is much greater than between the highest ape and the lowest ape' (EA 374). In particular, he rejects the notion of a *real* missing link, an intermediary 'ape-man' blending human and simian characteristics:

> Particularly while I resided among the tribes found in the mountains near the banks of the Ovenga river, where the gorilla is rather more

> common than anywhere else, I searched in vain if an intermediate race, or rather several intermediate races or links between the natives and the gorilla, could be found; and I must say here that I made those inquiries conscientiously, with the sole view of bringing before science the facts which I might collect. But I have searched in vain: I found not a single being, young or old, who could show an intermediate link between man and the gorilla, which would certainly be found if man had come from the ape. I suppose from these facts we must come to the conclusion that man belongs to a distinct family from that of the ape. The first belonging to the order Bimana, and the latter to the quadrumanous series. (EA 378–9)

Despite this concluding statement, Du Chaillu's report remains open to contradictory interpretations by the supporters and opponents of evolution theory. Whereas Thomas Henry Huxley uses it to strengthen his claim that humans belong to the order *Primates*, Richard Owen comes to the opposite conclusion, based not least on his dissection of a specimen provided by Du Chaillu. For Owen, humans constitute the separate genus *Homo* which in turn forms one order, *Bimana*.[50] Owen, one of the most formidable – and indeed, one of the most distinguished and knowledgeable – adversaries of evolution theory, insisted again and again on man's unique status, even biologically separate from animals: 'Man is the sole species of his genus, the sole representative of his order and subclass.'[51]

By contrast, Huxley reserves the special status of men to his mental capacities; anatomically and physiologically, man belongs to the primate order. He describes apes and ape-like human ancestors in terms which prefigure Freud's notion of the uncanny: as threatening precisely because they are familiar, because they resemble human beings. The exploration of man's place in nature, and his relation with apes, becomes necessary in order to confront the intellectual shock brought about by Darwin:

> The importance of such an inquiry is indeed intuitively manifest. Brought face to face with these blurred copies of himself, the least thoughtful of men is conscious of a certain shock, due perhaps, not so much to disgust at the aspect of what looks like an insulting caricature, as to the awakening of a sudden and profound mistrust of time-honoured theories and strongly-rooted prejudices regarding his own position in nature, and his relations to the under-world of life; while that which remains a dim suspicion for the unthinking,

> becomes a vast argument, fraught with the deepest consequences, for all who are acquainted with the recent progress of the anatomical and physiological sciences. (MPN 59)

On the one hand, Huxley acknowledges the psychological outrage inflicted by tearing down the wall between man and animals; on the other hand, he recuperates the damage by treating it as a purely intellectual problem. He calmly reviews the evidence for and against treating man as a biological entity. In terms of reproduction, embryological development, anatomical structure, nutrition, and finally, descent, the 'reply is not doubtful for a moment': 'Without question, the mode of origin and the early stages of the development of man are identical with those of the animal immediately below him in the scale: – without a doubt, in these respects, he is far nearer the Apes, than the Apes are to the Dog' (MPN 65). Huxley really rubs it in, but only to counter more strongly the attacks against evolution which see in common descent a theory degrading to man. On the contrary, Huxley regards man's rise from 'humble origins' – in contrast to the version of his fall from grace through original sin – as a stupendous success story: 'thoughtful men, once escaped from the blinding influences of traditional prejudice, will find in the lowly stock whence man has sprung, the best evidence of the splendour of his capacities; and will discern in his long progress through the Past, a reasonable ground of faith in his attainment of a nobler Future' (MPN 110). The open-endedness of Darwin's concept of evolution is partly cancelled: the expectation of a 'nobler Future' is, if not certain, at least probable. While having no reservations about classifying man as a primate, Huxley simultaneously contains anthropological anxiety by reintroducing the absolute demarcation line separating man from animals on the intellectual and moral level. The Cartesian difference marker, reason, again belongs to man alone and raises him above nature:

> Our reverence for the nobility of manhood will not be lessened by the knowledge, that Man is, in substance and in structure, one with the brutes; for, he alone possesses the marvellous endowment of intelligible and rational speech, whereby, in the secular period of his existence, he has slowly accumulated and organized the experience which is almost wholly lost with the cessation of every individual life in other animals; so that now he stands raised upon it as on a mountain top, far above the level of his humble fellows, and transfigured from his grosser nature by reflecting, here and there, a ray from the infinite source of truth. (MPN 112)

In comparison, Charles Darwin, after his initial hesitance, was more radical than his 'bulldog'. In 1871 he finally addressed the contentious issue of man's place in nature: *Homo sapiens* did not belong into a separate class of his own, but was 'the co-descendant with other mammals of some unknown and lower form' (DM 152). In one respect in particular, Darwin went farther than Huxley: even concerning their intellectual and moral qualities, humans and animals differed only in degree, not in kind. Most notably, he emphasised the fact that the mental faculties of humans had been developed by natural selection. Darwin does acknowledge the huge difference existing between men and animals, but he insists that it is only gradual:

> No doubt the difference in this respect is enormous, even if we compare the mind of one of the lowest savages, who has no words to express any number higher than four, and who uses hardly any abstract terms for common objects or for the affections, with that of the most highly organized ape. […] The Fuegians rank amongst the lowest barbarians; but I was continually struck with surprise how closely the three natives on board H.M.S. 'Beagle', who had lived some years in England, and could talk a little English, resembled us in disposition and in most of our mental faculties. If no organic being excepting man had possessed any mental power, or if his powers had been of a wholly different nature from those of the lower animals, then we should never have been able to convince ourselves that our high faculties had been gradually developed. But it can be shown that there is no fundamental difference of this kind. (DM 66–7)[52]

Victorian racist assumptions provide the parameters for the evolutionist argument: 'lower races' constitute a 'living link' demonstrating the continuity of the evolutionary ladder. Darwin goes on to reconsider the difference markers traditionally distinguishing man: although speech belongs to man alone, animals are able to communicate with each other, and – e.g. in the case of dogs – to understand human speech (DM 87); apes use rudimentary tools (DM 83). Although animals do not possess self-consciousness in the fullest sense, the memories of an old dog reflecting 'on his past pleasures or pains in the chase' may be said to constitute a form of inchoate self-consciousness not very different from the powers of reflection of 'the hard-worked wife of a degraded Australian savage, who uses very few abstract words, and cannot count above four' (DM 86). The last comparison discloses once more the entanglement of Darwin's critique of a separate status of man with

the racism of his time. His negation of the discontinuity of the human and the animal makes him vulnerable to racist inflections, leading him often to use the 'lower races' of humankind as examples of 'links' between 'civilised humanity' and 'higher animals'.

Darwin's deconstruction of the absolute human–animal difference includes the faculty on which the special status of humans rests in the entire tradition from Descartes to Huxley: reason. Even here, man excels only in degree and not in kind:

> Of all the faculties of the human mind, it will, I presume, be admitted that *Reason* stands at the summit. Only a few persons now dispute that animals possess some power of reasoning. Animals may constantly be seen to pause, deliberate, and resolve. It is a significant fact, that the more the habits of any particular animal are studied by a naturalist, the more he attributes to reason and the less to unlearnt instincts. (DM 77)

Darwin's evolution theory led to the most radical questioning of man's status in nature. It remains to be asked whether the break with the scientific tradition was as revolutionary as contemporary sources suggest. Harriet Ritvo maintains that although the publication of *On the Origin of Species* can indeed be considered to mark the beginning of a new era in the study of life – a paradigm shift from natural history to biology – and although Darwin's theory 'eliminated the unbridgeable gulf that divided reasoning human being from irrational brute',[53] some important continuities remained. Darwin's theory did not necessitate a regrouping on a systematic level, but rather continued earlier taxonomic work, e.g. that of Linnaeus. Furthermore, evolution theory, at least in Huxley's reading, was a forceful assertion of human superiority, not a break with that assertion: 'Clearly, if people were animals, they were the top animals; and with God out of the picture, the source of human preeminence lay within. Ironically, by becoming animals, humans appropriated some attributes formerly reserved for the deity.'[54]

Romancing the bones: missing links

The intermaxilla and the Archaeopteryx

The idea of organic connectors, closing a gap between two taxonomic classes in nature, long predated the specific notion of the 'missing link' developed in the context of evolution theory – with a significant

difference. The Aristotelian master metaphor of the chain of being required plenitude: gaps between individual links would disrupt the idea of a perfect, harmonious order of nature. In this sense, Arthur O. Lovejoy has observed, 'every discovery of a new form could be regarded, not as the disclosure of an additional unrelated fact in nature, but as a step towards the completion of a systematic structure of which the general plan was known in advance, an additional bit of empirical evidence of the truth of the generally accepted and cherished scheme of things'.[55] Accordingly, the discovery of the ambiguous nature of the freshwater polyp *Hydra* by the naturalist Abraham Trembley in 1740 was hailed as a sign of the completeness of the chain of being. Earlier in the century, Antonie van Leeuwenhoek had classified the polyp as a plant, but Trembley observed animal characteristics like the powers of locomotion, contraction and extension, and the ability to catch and digest prey. Thanks to its double nature, Trembley's polyp 'represented the connecting link between the forms of vegetative and animal life'.[56]

In the spatial system of eighteenth-century natural history, the idea of connection signalled precisely the opposite of disruption and change. Even the prospect of a close relationship between humans and apes could be viewed with equanimity. This would change radically with the dynamic, temporal reconceptualisation of science in the nineteenth century. This fundamental epistemological shift can be demonstrated with the help of two examples: the intermaxillary bone, first described by Johann Wolfgang von Goethe in 1784 as a distinct segment of the human skull, and the Archaeopteryx, discovered in the Solnhofen quarry in 1861.

Before Goethe's anatomical studies proved the contrary, it was assumed that humans were the only group of mammals who did not possess the *Os intermaxillare* as a part of the upper jaw. By comparing not only the skulls of adult humans, but also of children, Goethe discovered that humans possess the bone in a rudimentary form; the sutures separating it from the rest of the upper jaw however tend to disappear in the adult. Consequently, the intermaxillary bone is not a sign of difference separating men from the animal realm, but rather a sign of connection, of the plenitude of nature.[57] In the essay presenting the results of his observations, Goethe emphasised the idea of connection:

> It would then be possible to go into more detail and use a precise, step-by-step comparison of many animals to progress from the simplest to the most complex, from the small and limited to the vast and far-reaching. What a gulf between the *os intermaxillare* of the

> turtle and the elephant, and yet an intermediate series of forms can be found to connect the two![58]

The simplest organism is connected to the most complex, the tiniest animal to the most enormous. The discovery of the intermaxillary bone in the human skull proves for Goethe man's integration into the unity of nature. Man is not built on a different construction plan: 'Vielmehr ist der Mensch aufs nächste mit den Thieren verwandt.'[59] This statement does not make Goethe uneasy. On the contrary, it affirms the ideal plan on which all nature is built, the unity underlying different morphological structures. Instead of inspiring anxiety, his discovery leads Goethe to express his joy at this demonstration of the harmony of nature, in which the great is mirrored in the small. In this view, the human is not considered as the dominant, normative model to which all other organisms have to be compared. Rather, Goethe's endeavours as a scientist are bent on the (re-)construction of an underlying archetype, a general model from which all others derive. This ideal form was to be arrived at through generalisation based on comparative anatomy, considering not only adult organisms but also organisms in different stages of development.[60]

These blueprints have the function of internal laws that guide and delimit the development of organisms by an inherent *Bildungstrieb*, a teleological unfolding – 'evolution' in the eighteenth-century sense of the word – of organic forces giving rise to nutrition, growth and reproduction. In this teleological determination of organic development resides the greatest difference between Goethe's concept of nature on the one hand and Darwin's on the other hand, despite their apparent affinity concerning the relation between humans and other animals:

> For Goethe, even though it is not possible to reduce life to strict mechanistic laws, a *science* of life is possible nonetheless because there are internal laws of biological organization. These laws are expressed phenomenologically as morphotypes and *Baupläne*, and they are the essential core of the animal. For Darwin, on the other hand, morphotypes are not the manifestation of biological laws at all; they are simply the effects of natural selection operating on the descendants of a common ancestral form. The search for internal laws of organization turns out to be an illusion in Darwin's view. By invoking community of descent to explain commonality of form the 'biological laws' of the morphologist are simply dismissed by Darwin.[61]

In other words, in Darwin's theory organisms are not related in spatial terms, as representatives of an underlying ideal principle, but through a temporal alignment, through descent. The chain of being is replaced by a genealogical model. The simplest and the most complex organisms are no longer connected through a static hierarchy keeping every being in its place, but through development. The most complex organism once *was* the simplest. Under these changed epistemological conditions, the implication in Darwin's *On the Origin of Species* concerning man's close relationship to animals cannot be received in the same light as Goethe's apparently similar assertion. Where Goethe could see inner laws and greater harmonies, Darwin's contemporaries detect in his final conclusion that man is, like the other species, the result of an undirected process of natural selection, only the beginning of nihilism and chaos.

If Darwin's theory is correct, then the number of extinct intermediate varieties must be enormous: since natural selection depends on a great number of infinitesimally small changes, it must have produced a graduated chain of connecting links between ancestor and descendant. However, as Darwin deplores in the *Origin of Species*, '[g]eology assuredly does not reveal any such finely graduated organic chain; and this, perhaps, is the most obvious and gravest objection which can be urged against my theory' (OS 227). In a slightly tautological argumentation Darwin affirms that, since his explanation of evolution is the only one that makes sense, the absence of connecting links must be due to their incomplete preservation – 'the crust of the earth is a vast museum; but the natural collections have been made only at intervals of time immensely remote' (OS 141) – and to the insufficient exploration of that 'natural museum'. Only a very small percentage of earlier life forms were preserved in fossilised form, and only a small number of these fossils had been discovered in Darwin's day:

> For my part, following out Lyell's metaphor, I look at the natural geological record, as a history of the world imperfectly kept, and written in a changing dialect; of this history we possess the last volume alone, relating only to two or three countries. Of this volume, only here and there a short chapter has been preserved; and of each page, only here and there a few lines. Each word of the slowly-changing language, in which the history is supposed to be written, being more or less different in the interrupted succession of chapters, may represent the apparently abruptly changed forms of life, entombed in our consecutive, but widely separated, formations. On this view, the difficulties above discussed are greatly diminished, or even disappear. (OS 251)

The book of nature, as it presents itself to Darwin's eyes, is torn, scattered and incomplete. However, an underlying unity and plenitude, that is almost reminiscent of Goethe's view of nature, seems implicitly to support the tattered surface. But, to reiterate, the meaning of the 'finely graduated organic chain' has been completely transformed in the eighty years separating the two models: for Darwin, the chain is not expressive of an unchanging law governing the teleological unfolding of the morphotype. The chain is now conceptualised as temporal and genealogical, and that means, as contingent: 'The world, it has often been remarked, appears as if it had long been preparing for the advent of man: and this, in one sense is strictly true, for he owes his birth to a long chain of progenitors. If any single link in this chain had never existed, man would not have been exactly what he now is' (DM 172). The shock produced by this simple phrase can hardly be overestimated. Man is not the final cause of natural history, but the chance product of slowly accumulated changes – a being whose present form and very existence are dependent upon an infinite number of unmotivated and unpredictable variations and adjustments in the past. In this rejection of teleology and the consequent deposition of man from his privileged place in nature consists the major difference between the two moments in history, between Goethe and Darwin.

The discovery of an intermediary form connecting two different, apparently unrelated species would go far in validating evolution theory, although its absence does not disprove it. The missing link in this analytic or 'detective' sense is a heuristic construct, a 'missing link' in the chain of evidence whose existence can be deduced by the well-informed researcher:

> The belief that animals so distinct as a monkey, an elephant, a humming-bird, a snake, a frog, and a fish, etc., could all have sprung from the same parents, will appear monstrous to those who have not attended to the recent progress of natural history. For this belief implies the former existence of links binding closely together all these forms, now so utterly unlike. (DM 164–5)

This sense of monstrosity attributed to the uninitiated is the very opposite of Goethe's delighted marvelling at the connections between the tortoise and the elephant. The introduction of genealogy simultaneously raises the problem of monstrous links and offers the solution: the idea of minute variations which in themselves are no longer monstrous. The discovery of a life form conjoining the features of two different

species would clinch Darwin's argument. The search for the missing link therefore becomes the El Dorado of post-Darwinian debates, both in the hard realities of palaeoanthropology and in the imaginary space of literature.

The archaeological discoveries made in the course of the nineteenth century, beginning with the first dinosaur fossils found in southern England, contributed to building up the fossil record which, although contested for a long time, gradually confirmed the idea of evolution.[62] One of these discoveries was particularly significant: in 1861, the first Archaeopteryx fossil was found at the Solnhofen quarry in Bavaria. It seemed to combine reptilian features – e.g. a long tail – with bird-like characteristics – e.g. feathered wings. As an obvious candidate for a missing link connecting two classes of animals, the Archaeopteryx immediately became the focus of controversy between Darwinians and anti-Darwinians. The disputes centred on its classification (was it a reptile, a bird or, indeed, an in-between creature?), its name (the alternative Griphosaurus was proposed) and its accessibility to the scientific community. After prolonged negotiations, the Archaeopteryx was purchased by the British Museum and studied by the curator of the Natural History Section, Richard Owen, the man who had coined the term 'dinosaur' (horrible lizard) and who was Britain's most prominent opponent of evolution theory. In a lecture given to the Royal Society in 1862, Owen proposed to consider the Archaeopteryx as the earliest example of a fully-formed bird. For the time being, the missing link option had been silenced.

But Thomas Henry Huxley, present at the Royal Society lecture without rising, on that occasion, to Owen's challenge, went on to devote the next years to the study of living and fossil birds and reptiles. These thorough studies in comparative anatomy were soon to bear fruit. In 1867, during a visit to the Oxford Museum, he discovered that the skeleton of a Megalosaurus had been reconstructed incorrectly: a bone resembling the ilium, normally found in the pelvic region of living birds, had been placed in the shoulder of the Oxford Megalosaurus. Huxley's revised reconstruction of the skeleton showed a much greater overall resemblance to the skeletal structure of birds than had hitherto been acknowledged. Further research at the British Museum revealed that Owen's reconstruction of dinosaurs was all wrong: in contrast to the clumsy-looking, mammal-like quadrupeds of Owen's models, a large group of dinosaurs walked on two legs, showing a greater structural similarity to living birds.[63] In particular, the comparison between the Archaeopteryx and a small dinosaur called Compsognathus showed

that the former was not just, as the name indicates, an 'old bird', but a dinosaur with feathered wings – the Archaeopteryx was restored as a strong candidate for the missing link.[64]

Although the Archaeopteryx also closes a gap, it has a very different significance from that of the intermaxillary bone: it does not denote the great harmony of nature, but transformation, loss, extinction. The missing link changes its meaning, from Goethe's sign of plenitude to a sign of lack, of deferred origin. The fact that the Archaeopteryx remains so elusive – that the search for its proper place in the genealogical network connecting primitive organisms to highly developed ones, and finally, to man, resists closure – adds further weight to its potency as a cultural symbol: a symbol not just of hybridity, of boundary confusion, but of a complete lack of order, of desolate randomness in what can hardly continue to be called the creation. In the ordered world of the chain of being, even the most humble creature mirrored God; in post-Darwinian nature, every organism is left to struggle for itself. In contrast to Goethe's notion of an inner law, the *Bildungstrieb*, pre-determining the development of the morphotype, the Darwinian notion of development insists on its contingency. Instead of producing harmony, it can result in disorder, in occasional misfits:

> He who believes that each being has been created as we now see it, must occasionally have felt surprise when he has met with an animal having habits and structure not at all in agreement. [...] He who believes in separate and innumerable acts of creation will say, that in these cases it has pleased the Creator to cause a being of one type to take the place of one of another type; but this seems to me only re-stating the fact in dignified language. He who believes in the struggle for existence and in the principle of natural selection, will acknowledge that every organic being is constantly endeavouring to increase in numbers; and that if any one being vary ever so little, either in habits or structure, and thus gain an advantage over some other inhabitant of the country, it will seize on the place of that inhabitant, however different it may be from its own place. (OS 151–2)

God's infinite care – but also God's cruel sense of humour manifested in the occasional production of freaks – had been replaced by the blind struggle of the organism for its survival. In this precarious and chaotic world, boundaries became more elusive. The figure of the missing link symbolised this new brittleness; as such, it became a central metaphor in the novels exploring anthropological anxiety.

Hermeneutics of the missing link: the Sherlock Holmes method

The controversies around the Archaeopteryx turned around two distinct but related issues: authenticity and interpretation. Was the winged lizard a genuine find or a fabrication? And, if genuine, what did the fossil tell us – how could it be *read*? The hermeneutic aspect of missing links was inseparable from the practical and scientific activities surrounding it: digging it up, mapping, measuring, describing. In fact, the new sciences of palaeontology and palaeoanthropology were closely connected to the other hermeneutic sciences emerging from the early nineteenth to the early twentieth century: textual (Bible) criticism, criminology and psychoanalysis.

Carlo Ginzburg subsumes these disciplines, not based on the 'Galilean' model of objective, quantitative science but on the observation of signs, clues, symptoms, under the heading of a 'conjectural' or semiotic paradigm. The distinctive mark of this paradigm is its qualitative nature: the hermeneutic activity is exercised on such an elusive, incomplete or obscure material that it requires the skills of a specifically trained and exceptionally gifted 'reader'. In the 1870s, the art critic Giovanni Morelli, writing under the pseudonym Ivan Lermolieff, proposed a new method to distinguish originals from copies: art historians should pay attention, not to the conspicuous characteristics of a painting, but to the trivial details like the shapes of earlobes or fingernails, details that betray the individuality of an artist more faithfully than the grand – and easily imitated – gesture. Ginzburg compares the 'Morellian method' to Sherlock Holmes's method – 'the art connoisseur resembles the detective who discovers the perpetrator of a crime (or the artist behind a painting) on the basis of evidence that is imperceptible to most people'[65] – and to Freud's approach to the unconscious. Indeed, Freud was familiar with Morelli's writing and drew himself the analogy between his method of classifying pictures and psychoanalysis: 'It seems to me that [Morelli's] method of inquiry is closely related to the technique of psycho-analysis. It, too, is accustomed to divine secret and concealed things from despised or unnoticed features, from the rubbish-heap, as it were, of our observations.'[66]

Deciphering the book of nature from a single letter – this became the operative trope for a large group of disciplines and pseudo-sciences that moved in the liminal area between the positive sciences and and what could anachronistically be called cultural studies: Lombroso's criminology, Bertillon's anthropometry, Morelli's art history. The shape of an ear, overlooked by the casual observer, would give away the latent, deep-seated truth to the specialist: the atavistic nature of the born

criminal, the true identity of the recidivist offender, the real provenance of a painting. These new sciences wore the garb of positivism: they depended on exact data and statistics. But to make the leap from surface to deep structure, from insignificant detail to complete understanding, an extra factor was required that played no role – in fact, was rigorously excluded – in Galilean science: intuition, or individual experience, or the personality of the researcher. Sherlock Holmes, Dr Watson and the detective Lestrade all have access to exactly the same data, but only Holmes can infer, for example, from two severed ears the whole drama of jealousy and murder of which they are the only clues.[67] It is of no avail to say 'You know my method. Use it!' – Watson is never able to reproduce Holmes's results. Obviously, the non-fictional methods proposed by Lombroso, Bertillon and Morelli did make a claim of demonstrability, repeatability and general applicability.[68] But Conan Doyle's stories illustrate the implicit conundrum, the element of guesswork and persuasion disrupting the positivist paradigm.

What Ginzburg calls the 'Galilean' model of science has recently been studied in depth under the designation of 'mechanical objectivity' by Lorraine Daston and Peter Galison. They consider objectivist epistemology, a central tenet of which is precisely the exclusion of guesswork and 'personality' on the part of the scientist, as a historically specific approach to the study of nature which emerged in the nineteenth century and was, in fact, closely connected to the professionalisation of science following the establishment of evolution theory, and which was perfectly embodied in Thomas Henry Huxley. Objectivity aimed at eliminating all traces of the interpreter's skill, fantasy, or judgement: 'Objectivity is blind sight, seeing without inference, interpretation, or intelligence.'[69] Since Huxley is one of Daston and Galison's chief witnesses for the successful institutionalisation of mechanical objectivity, it is curious to see that he also vouches for an entirely different epistemology, Ginzburg's semiotic or conjectural sciences. This discrepancy is partly due to the material on which the respective studies are based: Daston and Galison analyse scientific atlases, i.e. a type of (often collective) publication in which dominant scientific practices are strictly codified, whereas Ginzburg mainly looks at essays written by individual scientists, a genre inviting playfulness, idiosyncrasy and the affirmation of the author's personality. Moreover, we can assume that the process of dividing the scientific (neutral, controlled) from the artistic (forceful, personal) subject, which stands at the core of mechanical objectivity, was even more heterogeneous than Daston and Galison suggest.

The semiotic sciences were connected by what could be called the Sherlock Holmes paradigm – 'deduction' (more accurately, induction) based on the observation of insignificant details – but what has actually been referred to by Thomas Henry Huxley as 'Zadig's method'. In Voltaire's eponymous novel, Zadig, schooled in the observation of nature, is able to describe the queen's dog and the king's horse without having seen the animals. His astonishing feat is not only, as Ginzburg observes, the true hour of birth of the detective novel, but also of the method Huxley called 'retrospective prophecy'. This method, used both in Lyellian geology and in Darwinian evolution theory, is simply the assumption that 'we may conclude from an effect to the pre-existence of a cause competent to produce that effect'.[70] It presupposes the principles Lyell postulated for geology: actualism, uniformitarianism and a steady-state view of the earth. According to Huxley, the application of Zadig's logic led to the foundation of the historical or 'palaetiological' sciences, including modern geology, biology and evolution theory as well as palaeontology. The activity of a palaeontologist is not very different from that of a nomadic hunter in search for food:

> From freshly broken twigs, crushed leaves, disturbed pebbles, and imprints hardly discernible by the untrained eye, such graduates in the University of Nature will divine, not only the fact that a party has passed that way, but its strength, its composition, the course it took, and the number of hours or days which have elapsed since it passed. But they are able to do this because, like Zadig, they perceive endless minute differences where untrained eyes discern nothing; and because the unconscious logic of common sense compels them to account for these effects by the causes which they know to be competent to produce them. (MZ 244)

At least certain branches of modern science are, consequently, not based on a model of systematic deduction, but on tracking. At first sight, this seems to democratise the instance of the observer, because all that is demanded is common sense and a trained eye – the simple hunter and countryman will outdo the professor whose knowledge is purely theoretical. But in fact, the skillful interpreter of clues gains an almost shamanistic aura, as the example of Sherlock Holmes demonstrates – some simply 'have it', while others don't. The debate on evolution and its ramifications hinged to a considerable extent on this peculiar ability to 'see'. For instance in the Archaeopteryx wars, Huxley's – sudden, inspired – detection of the misplaced ilium bone

resulted in a completely new reconstruction of dinosaur skeletons, and scored a major victory for the pro-evolution party. Darwin's own theory of evolution was in a large part conjectural in Ginzburg's sense. Darwin exerted himself to achieve scientific validity by heaping clue upon clue, by applying Zadig's method many times over. From the diversity of domestic pigeons and the distribution of Galapagos finches he deduced the underlying principles of natural variation and selection.[71] Evolution theory was based, in fact, on reasoning backwards in the manner of Zadig or Sherlock Holmes.

Darwin succeeded in winning credibility not least by the sheer mass of facts he presented to his readers. But what happens in a science deprived of 'facts', in which the scientist has to make do with the equivalent of the detective's little heap of ash or single fingerprint? This is the case of palaeontology, concerned with what Darwin described as the 'history of the world imperfectly kept', full of missing pages and written in a language no longer known to us (OS 52). Huxley's lecture on Zadig's method in fact pursues the goal of explaining the mystery of palaeontological achievements – the reconstruction of a whole skeleton from a single tooth, and the description of the entire fauna of a long-lost period on the basis of a few fragmentary fossils:

> The whole fabric of palaeontology, in fact, falls to the ground unless we admit the validity of Zadig's great principle, that like effects imply like causes, and that the process of reasoning from a shell, or a tooth, or a bone, to the nature of the animal to which it belonged, rests absolutely on the assumption that the likeness of this shell, or tooth, or bone, to that of some animal with which we are already acquainted, is such that we are justified in inferring a corresponding degree of likeness in the rest of the two organisms. It is on this very simple principle, and not upon imaginary laws of physiological correlation, about which, in most cases, we know nothing whatever, that the so-called restorations of the palaeontologist are based. (MZ 246)

Huxley proclaims that it is not the system but the detail which is decisive. Of course, the detail is only 'legible' in relation to a systematic body of knowledge – comparative anatomy – just as the cigar ash only 'speaks' to Sherlock Holmes because he has made a study of all kinds of ash, and written a little monograph on the topic. Huxley's defence of retrospective prophecy sounds very persuasive, but the proceeding is riddled with three problems: the 'problem of the method' itself – it is not really verifiable or, indeed, falsifiable. Alternative reconstructions of

a skeleton can be proposed, but there is no possibility of ultimate proof. Related to it is the 'problem of the subject': Zadig's method depends on the individual talent, experience and integrity of the interpreter. This fundamental uncertainty begs the question, not only of the plausibility of every retrospective prophecy, but of deliberate falsification – a famous instance being the forgery of the Piltdown skull.[72] Finally, there is the 'problem of the object', its fragmentary, opaque, elusive character: the clue resists reading. The *missing* link is exemplary of the conjectural approach, precisely because it is *not there*. It is only represented by a trace, which simultaneously allows all readings and no reading. Even in painstaking palaeoanthropological reconstructions, the missing link is, up to a point, fictional; conversely, it becomes one of the leading metaphors in fiction after Darwin.

Links to the past: Neanderthal Man and Pithecanthropus

In the second half of the nineteenth century, biology and palaeoanthropology were engaged in the construction of a new *grand récit* that was going to supplant the Christian story of human origins. The missing link and related fantasies about the *ur*-man play an important role in this endeavour, which is an example for the mutual permeability between scientific discourse and imaginative literature. The figure of the missing link proposed by the scientists was literally a fiction, an invention. Concomitantly, the fictional missing link of lost world novels was created in response to the urgent questions raised by palaeoanthropology and by the advocates of evolution.

Palaeoanthropology, and with it the search for the missing link in a literal sense, begins with the discovery of human fossil bones by the teacher and local historian Johann Carl Fuhlrott in a cave in the Neanderthal valley near Düsseldorf in 1856.[73] Or rather, some labourers whose names have not been preserved find the bones and are ready to discard them; Fuhlrott is the man with the trained eye who perceives their significance. If the bones are as old as he assumes, they could prove the existence of humans in the Diluvium, i.e. man would be much older than had been assumed so far.[74] The skull and skeleton parts are passed on to the anatomist Herrmann Schaaffhausen who publishes the first description: 'the extraordinary form of the skull was due to a natural conformation hitherto not known to exist, even in the most barbarous races'.[75] The opposition to Schaaffhausen's theory that the Neanderthal specimen represents modern man's primitive ancestor is headed by the pathologist Rudolf Virchow who interprets it as a skeleton of recent man and explains its peculiar appearance by deformations caused by rickets.

The Neanderthal controversy, just preceding the publication of *On the Origin of Species*, already contains the elements of future missing link narratives: the often slightly murky circumstances of the discovery, the lucky presence of the man with the trained eye, the ambiguous, 'silent' nature of the fossils themselves that invites different readings, and finally the contradictory interpretations proposed by the experts. For a scientific difference of opinion, the altercation in this as in later cases is extremely heated because both the personal and the ideological stakes are particularly high – human fossils always tend to become 'bones of contention'.[76] With the notion suggested by the Neanderthal fossils – the existence of an extinct hominid species – the idea of a human-like figure linking modern man to these ancestors and, in a further step, to his animal ancestry, is born. One of the earliest theoretical elaborations of this figure is brought forward by Ernst Haeckel.

Haeckel was one of the most committed followers of Darwin's theory in Germany. He championed evolution theory in his biology lectures at the University of Jena. In one of these lecture series, later published under the title *Natürliche Schöpfungsgeschichte* (*The History of Creation*, 1868), he not only gave a complete overview of the 'Descendenztheorie' (theory of descent), but also one of the first pedigrees of man. In the nineteenth lecture, he proposes a theory of human development in twenty-two stages, beginning with the monera, an unstructured, amorphous clot of organic matter. Haeckel sketches an ascending, monolinear scale of development from these simple organisms through the invertebrate and vertebrate animals, culminating in the last three stages: (20) the anthropoid apes (*Anthropoides*), similar to the modern orang-outang, gorilla and chimpanzee; (21) the ape-men (*Pithecanthropi*) or a-lingual primal men (*Alali*), and (22) true or speaking men (*Homines*). Whereas the true apes and the true men were 'real', in the sense that they or their very similar descendants were actually existent in the present, the intermediate creatures of Haeckel's twentieth stage were purely hypothetical: the *Pithecanthropus* is the *missing* link.

The grounds of differentiation between the stages are very suggestive: the anthropoid apes are distinguished from the tailbearing apes of the nineteenth stage (*Catarhina menocera*) by the loss of the tails, the partial loss of body hair, and in particular by the development of the frontal brain. In other words, brain development separates the apes from the other animals and moves them closer to the ape-men and true humans. The distinctive mark of the *Pithecanthropi* setting them off from the apes of the twentieth stage is bipedalism, their difference from the final, twenty-second stage is their lack of articulate language. With respect to

their anatomy, the *Pithecanthropi* or *Alali* almost completely resemble *Homo*. The transition from human-like apes to ape-like humans was effected through two 'adaptive activities' (*Anpassungsthätigkeiten*): the adoption of the erect gait, bringing them up to stage 21, and the development of an articulate language and the corresponding organs, which in turn resulted in the interaction with a third area: brain development. Articulate, i.e. verbal language that already shows a certain degree of abstraction, is the mark of the true humans of stage 22.[77] However, if language is the distinctive mark that divides 'true man' from the missing link, then the boundary is forever beyond the grasp of a science dealing with bones.

Although the Pithecanthropus is only a hypothesis explaining the transition from apes to men, his image is not abstract. In a move typical for the times, Haeckel connects the historical missing link with living 'primeval men', the 'lower races' that are relegated to human prehistory also by Darwin and other proponents of evolution theory:

> But considering the extraordinary resemblance between the lowest woolly-haired men, and the highest man-like apes, which still exist at the present day, it requires but a slight stretch of the imagination to conceive an intermediate form connecting the two, and to see in it an approximate likeness to the supposed primaeval men, or ape-like men. The form of their skull was probably very long, with slanting teeth; their hair woolly; the colour of their skin dark, of a brownish tint. The hair covering the whole body was probably thicker than in any of the still living human species; their arms comparatively longer and stronger; their legs, on the other hand, knock-kneed, shorter and thinner, with entirely undeveloped calves; their walk but half erect.[78]

The missing link is a composite form between anthropoid apes and the 'woolly-haired', dark-skinned inhabitants of anachronistic space. In this mixture of racist fantasy and biological fact, Haeckel projects an image of the missing link as both similar and different: it connects humans to their animal pedigree, but simultaneously, it is distanced from 'us', white civilised men. The missing link's missing link is the racialised Other who is thus moved closer to the animal realm.

Darwin's metaphorisation of the missing link

It is almost impossible to disentangle the material from the symbolic aspect of the missing link. Scientific reports about fossils are overlaid with literary patterns. The figurative use of the concept begins with

Darwin who metaphorises the missing link on two levels: on the structural level and in his use of examples. The first relates to the way in which he proceeds to construct the missing link: as a trace implied by the factual absence of intermediary forms. This lends a peculiarly insubstantial quality to the missing link. The construction is an equation with two unknown variables: only the descendant, the modern living form, is known; both the ancestor *and* the link have to be inferred. In other words, not only the connector but also the original are missing:

> I have found it difficult, when looking at any two species, to avoid picturing to myself forms *directly* intermediate between them. But this is a wholly false view; we should always look for forms intermediate between each species and a common but unknown progenitor; and the progenitor will generally have differed in some respects from all its modified descendants. (DM 227)

As a result, the missing link takes on an almost mythical quality: it is a pure figure of deferral, an unknown point of transition referring back to an equally unknown and uncertain origin. It is infinitely more than any tangible object, a fossil; but simultaneously it is less, the signifier of absence. This 'supplementary' structure of the missing link allows it to function as a disturbing misfit in the constitution of identity and otherness, and therefore as the central figuration of anthropological anxiety.

On the level of examples, Darwin does not restrict his use of the missing link to the concrete sense of 'extinct connecting forms'. Diverse 'lower' groups, such as women, 'idiots', 'savages' and apes serve as signposts to human origins. The *missing* link is thus exchanged for an existing, living connector that takes on its function as a marker of hybridity, boundary confusion and threatening extinction. This 'replacement link' appears in Darwin's writings notably in three modifications:

1. The 'lower members' of mankind indicate a warp in linear time, what Anne McClintock has called panoptical time.[79] In the discourses of imperial science (e.g. ethnography and anthropology), global history is re-arranged spatially so that it can be consumed in a single spectacle from a point of privileged invisibility. For evolution theory this means that primeval man and modern 'savages' become interchangeable – not unlike the way Freud will later treat the members of the primitive horde and modern neurotics. The notion of panoptical time coincides with the idea of anachronistic space; certain groups

are perceived as living out of time, out of history: 'Within this trope, the agency of women, the colonized and the industrial working class are disavowed and projected onto anachronistic space: prehistoric, atavistic and irrational, inherently out of place in the historical time of modernity.'[80] Consequently, geographical difference across space is figured as historical difference across time. The metaphorical missing links can thus be arrayed and viewed simultaneously by the panoptical gaze of the biologist. They are perceived to be equivalent to, and in terms of their evolutionary development, simultaneous with, the suppositional ancestor:

> The lower members in a group give us some idea how the common progenitor was probably constructed; and it is hardly credible that a complex part, arrested at an early phase of embryonic development, should go on growing so as ultimately to perform its proper function, unless it had acquired such power during some earlier state of existence, when the present exceptional or arrested structure was normal. The simple brain of a microcephalic idiot, in as far as it resembles that of an ape, may in this sense be said to offer a case of reversion. (DM 37)

Here, 'microcephalic idiots' and apes are seen as equivalent to the 'common progenitor', because their development has been arrested at – or has reverted to – the ancestor's level. The possibility of a separate development, and consequently the participation in history, is denied.

2. Atavistic traits figure as *pars pro toto* of the missing link. Again the factual missing link is replaced by a figurative one, this time a singular anatomical feature that connects progenitor and descendant. Since atavisms can occur in contemporary man (not just in the generic, but in the gendered sense of the word), they will dislocate his comfortable distance to the missing link. These synechdochic relations are further symptoms of anthropological anxiety, because they, again, disrupt linear time – uncanny reminders of the evolutionary past within the modern body:

> Of the anthropomorphous apes the males alone have their canines fully developed; but in the female gorilla, and in a less degree in the female orang, these teeth project considerably beyond the others; therefore the fact, of which I have been assured, that women sometimes have considerably projecting canines, is no serious objection to the belief that their occasional great development in

> man is a case of reversion to an ape-like progenitor. He who rejects with scorn the belief that the shape of his own canines, and their occasional great development in other men, are due to our early forefathers having been provided with these formidable weapons, will probably reveal, by sneering, the line of his descent. (DM 41)

Here, Darwin's argument anticipates the structure of Freudian thought: the denial of man's animal ancestry results in the revelation of that which it seeks to hide. Physical atavisms function as symptoms of the 'trauma' of animal ancestry. If the analogy is extended further, Darwin's theory, offering a scientific explanation of the past, can be considered as the 'talking cure' in which the patient, mankind, can work through his anxiety. In this sense, Darwinism is structurally analogous to psychoanalysis: it causes the narcissistic wound to man's self-esteem which it then professes to cure – but in both cases, the consolation offered by a scientific exploration of the patient's prehistory is evanescent. The cultural pessimism voiced in Freud's later writings corresponds to Darwin's bleak assertion of the contingency of human development.

3. The third use of the missing link is connected to extinction. Missing links are by definition extinct; figurative 'living' missing links simultaneously display and deny this possibility. In other words, fossil intermediary forms like the Archaeopteryx are traces of a process of extinction that really happened, a break in the organic chain. Darwin's modern go-betweens – pre-eminently savages and apes – are doomed to extinction due to the encroachment of white man. They incarnate the possibility of a further unravelling of the thread of life: they are about to become *real* missing links because they will disappear in the future, leaving 'civilised man' behind in splendid isolation. Apes, moreover, are in transition from the quadrupedal to the bipedal stage: they are about to *repeat* the crucial step in man's past that separated him from other animals. As transitional creatures, they are privileged witnesses of evolution:

> If the gorilla and a few allied forms had become extinct, it might have been argued, with great force and apparent truth, that an animal could not have been gradually converted from a quadruped into a biped, as all the individuals in an intermediate condition would have been miserably ill-fitted for progression. But we know (and this is well worthy of reflection) that the anthropomorphous apes are now actually in an intermediate condition; and no one

> doubts that they are on the whole well adapted for their conditions of life. (DM 53)

Man's closest relatives are here treated as missing links-to-be. They are witnesses of evolution in a double sense: oscillating between the quadrupedal and the bipedal stage, they demonstrate how the great transition in man could have happened. In this way, they are real connecting links between humans and animals. At the same time, they have already started out on the path to extinction. In Darwin's scenario, to imagine the disappearance of the intermediary form serves to prove the idea of gradual evolution as well as the hypothesis of missing links. The missing links of fiction, e.g. Conan Doyle's rediscovered ape-men, on the other hand hold out the hope that the evolutionary loss of species is only apparent, that somewhere out there the chain of being is still complete.

In the discourse on extinction, apes are always aligned with savages. The two groups are, as it were, the guardians of the great divide between humans and animals. But since apes have human characteristics ascribed to them, and savages – in particular Africans and Australian aborigines – are considered in nineteenth-century discourse on race as ape-like, both groups can alternatively be treated as missing links. This means that the 'great break' on which Darwin repeatedly insists becomes increasingly blurred. Only the extinction of the missing links – both variants – will re-establish the distinct divide between humans and animals:

> The great break in the organic chain between man and his nearest allies, which cannot be bridged over by any extinct or living species, has often been advanced as a grave objection to the belief that man is descended from some lower form; but this objection will not appear of much weight to those who, from general reasons, believe in the general principle of evolution. Breaks often occur in all parts of the series, some being wide, sharp and defined, others less so in various degrees [...]. But these breaks depend merely on the number of related forms which have become extinct. At some future period, not very distant as measured by centuries, the civilized races of man will almost certainly exterminate, and replace, the savage races throughout the world. At the same time the anthropomorphous apes, as Professor Schaaffhausen has remarked, will no doubt be exterminated. The break between man and his nearest allies will then be wider, for it will intervene

> between man in a more civilized state, as we may hope, even than the Caucasian, and some ape as low as a baboon, instead of as now between the negro or Australian and the gorilla. (DM 163)

Darwin is certainly not advocating the extermination of either anthropomorphous apes or the 'lower races' of mankind. But implicitly, he indicates the troubling effect represented by the missing link, the insecurity about the human–animal boundary that underpins anthropological anxiety. This boundary will in effect become stronger, the gap between animals and humans wider in future, but only at the price of extinction of the intermediate species. Anthropological anxiety thus includes two aspects: the fear of too little differentiation (the assimilation to the Other) and of too much (the extinction of related forms, and with it a loss of connection). The novels negotiating this anxiety use the missing link as their central organising metaphor. It is precisely the ambiguity of the missing link that makes it so interesting for literary texts: its polyvalence as a sign of connection and division, of development and extinction, of sameness and difference.

From bones to texts: uncanny links

The idea of an intermediary ancestor was always more than a heuristic device of evolution theory. Even within the framework of the sciences concerned with the reconstruction of human origins, the missing link acquired an almost fictional quality: it functioned as a symptom for the anxieties about man's genealogy, and consequently, his identity. Gillian Beer has argued that the missing link was an organising figure both for historical research and for the intellectual process of detection, thus joining the evolutionary quest narrative to the fictional detective story:

> It is no accident that the fascination with the missing link and the rise of the detective novel occur in the same historical period. The phrase 'the missing link' suggests a heuristic search, for a lost link in a chain of reasoning, as much as the search for the evidence of physical remains. It came also rapidly to signify outlandish, even monstrous creatures, as yet undiscovered and, quite probably, *fraudulent*. The search for the missing link therefore frequently shifts from the interpretation of physical vestiges to the detection of human agents.[81]

In the classical detective novel, the discovery of the missing link – the closure of the gap in the chain of reasoning – restores social order, at least in a superficial reading. But at second sight, the relation between

the quest and the closure, the middle of the narrative and the ending, suggests that the detective's disclosure must always disappoint. The pleasure – or the suspense – of the text is generated by the disorder of narrativity, and not the order of the solution.[82] Beer applies this notion to the search for both fictional and 'real', prehistorical missing links: 'The climax of anticipated discovery – finding the link – was one that could produce dread and delay rather than fulfilment.'[83] In Beer's interpretation, the missing link becomes a Derridean figure: 'Anxiety is comforted by deflection. Indeed, one could even argue that the search for the missing link (absence and creature at once) is an epitome of "différance", in Derrida's term: difference and deferral at once.'[84] The missing link is not just a piece of bone: it is a vanishing point for the discourses on evolution, providing structure but in itself unattainable.

The trope of the missing link was transposed quickly from scientific writing to fiction. Missing links appear as figures of biological and cultural alterity in different genres, from Victorian Gothics to detective stories, and in narratives with different ideological agendas, from anti-Darwinian satires to Wellsian science fiction. They can be used to serve the binary ordering of the world in terms of self and Other, or to point precisely to the ruptures in that order. More concretely, it is possible to put the missing link to effect in two ways: as a threat, questioning man's superior ontological status – representative of anthropological anxiety – or as a covenant, binding contemporary man to a less repressive, less alienated, more vital past – representative of the pleasure of regression. Quite often, literary texts resolve this tension by presenting two sets of missing link figures, one to be exterminated, the other to be assimilated in order to revitalise the jaded civilised man.

In a large part of the novels under scrutiny here, the anxiety of boundary confusion represented by the missing link is contained by the narrative order: although in the middle part of the plot the missing link is used to address and explore anthropological anxiety, at the end closure and containment of the disruptive boundary figure are achieved. These fictions are popular and, to a certain extent, formulaic: through the constant reiteration of only slightly varied configurations – human/ape, explorer/lost race, scientist/savage – the binary ordering of the world, with European man always in the dominant position, is naturalised.

However, it is precisely one of the features of the missing link that it is a 'third figure':[85] it cannot be easily subsumed into a binary structure, and consequently, cannot be fully contained. Even if, as in Arthur Conan Doyle's *The Lost World*, modern man succeeds in reaffirming his position as the 'top species' by exterminating the missing links, the

memory of the horrible moment of recognition of the self *in* the Other lingers on. The post-Darwinian missing link refuses to play along with the project of restoring plenitude. It is not comforting; it neither closes the gap between man and animal, civilisation and nature, present and past, nor does it affirm man's splendid isolation. Rather, it remains suspended in a liminal space, always just out of reach. Accordingly, the effect of the missing link as a literary device is itself uncanny, a pulsation between fascination and fear, desire and disgust. This effect can be observed quite clearly in *The Lost World*, where the narrator, journalist Edward Malone, is confronted with a missing link come alive:

> A face was gazing into mine – at the distance of only a foot or two. The creature that owned it had been crouching behind the parasite, and had looked round it at the same instant that I did. It was a human face – or at least it was far more human than any monkey's that I have ever seen. It was long, whitish, and blotched with pimples, the nose flattened, and the lower jaw projecting, with a bristle of coarse whiskers round the chin. The eyes, which were under thick and heavy brows, were bestial and ferocious, and as it opened its mouth to snarl what sounded like a curse at me I observed that it had curved, sharp canine teeth. For an instant I read hatred and menace in the evil eyes. Then, as quick as a flash, came an expression of overpowering fear. There was a crash of broken boughs as it dived wildly down into the tangle of green. I caught a glimpse of a hairy body like that of a reddish pig, and then it was gone amid a swirl of leaves and branches.[86]

These prehistoric ape-men have survived on an isolated plateau in South America, a classical 'anachronistic space' of arrested history. They are in-between creatures, half-apes, half-men, having all the bestial attributes such as projecting jaws, long, sharp canines and fur-covered bodies, but at the same time a social organisation, an inchoate intelligence and the ability to communicate. However, they are also *Alali* in Haeckel's sense: they lack the articulate language that makes the neolithic Indians found on the same plateau truly human. Malone's first encounter with an ape-man reminds us of Huxley's description of the realisation that man is closely related to apes: brought 'face to face with these blurred copies of himself, the least thoughtful of men is conscious of a certain shock' due to the intellectual upheaval provoked by evolution theory, but also by 'disgust at the aspect of what looks like an insulting caricature' of man (MPN 59). The ape-men are indeed 'insulting caricatures': they are

almost, but not quite, human – in their very similarity they seem to mock their superior relatives. It is precisely this simultaneous similarity and difference that makes them so threatening to the explorers' sense of identity. The missing links are 'uncanny' in Freud's sense of the word, both *vertraut* and *heimlich* (familiar, of the home, comfortable; secret) – a reminder of the shared origin – and *un-heimlich* – strange, mysterious, incommensurable. The uncanny is frightening *because* it is familiar: 'the uncanny is that class of the frightening which leads back to what is known of old and long familiar'.[87] Freud's etymological researches show that the word *heimlich* (secret) is ambivalent in all European languages; it merges into its opposite, *unheimlich*. Uncanny formations in fantastic literature, like the *doppelgänger*, unfold their specific horror because they are connected to regressive psychological stages.

In our context, the connection of the uncanny with a regression to the past is crucial. Uncanny encounters throw the subject back to an evolutionary stage before individual differentiation, before a clear separation from others and even from inanimate matter. Freud links, in the manner of Haeckel's biogenetic law, individual psychological development with the development of the species, equating infantile stages with 'primitive' people: 'It seems as if each one of us has been through a phase of individual development corresponding to this animistic stage in primitive men [...] and that everything which now strikes us as "uncanny" fulfils the condition of touching those residues of animistic mental activity within us and bringing them to expression.'[88] The uncanny effect of the missing link is therefore explicable as a direct threat to individual differentiation through the regression to a primitive stage – or more precisely, as a reminder, an actualisation of that repressed stage.

The passage from *The Lost World* quoted above can be read as a mirror scene: as the gaze of the narrator and the ape-man meet, there is a mutual recognition and simultaneous revulsion as they take in the Other's identity/difference. This distorted mirror effect results in hatred and fear, the feelings attributed by Malone to the ape-men; but one can imagine the same range of emotions playing, synchronously, across his own face: surprise, recognition, fear, hate. If the missing links show the human beings what they once were, the humans conversely show the ape-men what they might become – an equally horrible possibility?

The missing link is, at least potentially, a border figure, a 'third figure' disturbing the binary logic of realism. It functions as a device that negotiates the area of post-Darwinian anthropological anxiety by foregrounding the precariousness of the human–animal boundary, without

being 'subversive' in any facile sense. After all, too many of the novels under consideration here end with a neat narrative closure, the final disposal of the third figure. But in the main body of the novels, the missing link functions as an interloper who undermines the signifying processes operating in the dichotomies culture vs. nature, civilisation vs. barbarism, human vs. animal. By virtue of its in-betweenness, the missing link refuses to restore the lost plenitude of post-Darwinian nature, while simultaneously disabling man from assuming a position outside of, or superior to, nature.

3
Apes and Ape-men: The Anxiety of Simianation

> But what we cannot explain away is the look in his eyes. Even the most psychologically twisted performing chimp cannot withstand eye contact. It's the ultimate challenge of the animal kingdom. What sets us apart from the animals is not language or intelligence. What sets us apart is the fact that we can look each other straight in the eye.
>
> Peter Høeg, *The Woman and the Ape* (1996)[1]

Apes as figures of identity/alterity

The gaze of the ape: failed anagnorisis

Even in early descriptions of apes, such as Edward Tyson's *Homo sylvestris* of 1699, *simia* figured simultaneously as a representation of alterity and similarity, as men's Other and his mirror image. Apes therefore constitute a special case of the uncanny missing link: they denote men's close biological relationship with the animal world, while simultaneously staging the cultural difference which separates men from animals. In fiction, particularly from the nineteenth century onward, it is precisely this cultural divide that is put into question in simian figurations. From the romantic period onward, representations of apes imitating, or passing as, humans push the questions of mimicry and assimilation to a point were the notion of identity itself is invalidated, where the difference between alterity and similarity collapses. This challenge to a stable human–animal boundary thus predates Darwin's intervention, which, however, fundamentally raises the stakes. To show both the continuity and the new departure in ape narratives, this chapter includes a pre-Darwinian story,

Edgar Allan Poes 'Murders in the Rue Morgue', which in many ways prefigures the concerns of later texts.

The cultural function of the ape in the economy of human identity formation can be elucidated in terms of 'the gaze of the Other'. This concept has, both in the psychoanalytic reading of the family constellation and the Hegelian reading of social interaction, the function of affirming the subject's identity. In Jacques Lacan's description of identity formation, for example, the infant's succession from a fragmented body image to the identification with the unified image presented in the mirror is dependent not only on the actual reflection, i.e. the doubling of the self in the mirror, but on the affirmation of this process of identification by a *third* instance, the mother's gaze. In other words, the experience of identity is only possible in a social constellation. Intriguingly, Lacan begins his account of human identity formation with a reference to apes. Drawing on Wolfgang Köhler's experiments with chimpanzees in the early twentieth century (1925), Lacan describes 'the illuminative mimicry of the *Aha-Erlebnis'*, the moment the human infant recognises the image in the mirror as his own, as constitutive of a 'reflected' identity that is completely at odds with the young ape's lack of interest in its reflection:

> This act, far from exhausting itself, as in the case of the monkey, once the image has been mastered and found empty, immediately rebounds in the case of the child in a series of gestures in which he experiences in play the relation between the movements assumed in the image and the reflected environment, and between this virtual complex and the reality it reduplicates – the child's own body, and the persons and things, around him.[2]

The infant's identification with his mirror image implies that the human subject is divided between his physical body (which cannot be perceived by his own eyes as a totality), and the reflection in the mirror which alone can supply a sense of completeness. Consequently, human identity is built on a division between the physical entity and the cultural construction of wholeness, whereas the ape who finds the mirror image 'empty' is at one with itself. In literary texts like Frank Challice Constable's *The Curse of Intellect* (1895) and Franz Kafka's 'Report for an Academy' (1917) in which apes achieve human status by mastering language and cultural symbolisation, the natural stage before their respective captivity and transformation into humans is characterised precisely by their unity with nature and the absence of a split within

the self. The onset of human self-reflection is the beginning of division and alienation. Apes are therefore figures of identity, of non-alienation and, simultaneously, in their very closeness to humans, they denote the loss implicit in the achievement of culture.

The identity of the subject is developed through a series of dialectical syntheses; both at the stage of the mother–child dyad (the mirror stage) and in the act of mutual recognition on the social level, the human subject depends for self-recognition on the gaze of the Other.[3] As theorists of the gaze like John Berger and W.J.T. Mitchell have observed, it is precisely the animal's position outside the symbolic order, its radical otherness, that charges its gaze with a mystery: the animal is looking at the human, but does it really return his gaze? Does the animal acknowledge man's presence, or does it simply ignore him, look through him? Berger argues that the communion that seems to happen in the exchange of the gaze is an anthropomorphic illusion; the central event is not the animal looking at and acknowledging man, but man looking at the animal looking.[4] In other words, the animal functions as an empty plane reflecting man's solipsistic gaze. But still, disturbingly, there remains the possibility that the animal *is* looking back, silently, observing, passing judgement.[5]

Gerhard Neumann posits the exchange of the gaze (*Blickwechsel*) as a fundamental element in the play of self and Other in Western culture. The gaze of the animal forms an important, although submerged, part of this tradition of the constitution and affirmation of the self. Consequently, Neumann analyses the 'gaze of the animal' (*Blick des Tieres*) as a special case of the 'gaze of the Other' (*Blick des Anderen*). Drawing on the notion of *anagnorisis* developed in Aristotle's *Poetics* – the moment of recognition and affirmation of identity in Greek tragedy – Neumann suggests a clear division of labour between two privileged animals, the ape and the dog.[6] The classical locus of the encounter between man and dog is Odysseus' recognition by his faithful dog Argos on the wanderer's return to Ithaca, a model of *anagnorisis* as the moment in which the unity and integrity of the person is established.[7] Beginning with this scene, the dog, as man's tame companion itself a product of human culture, takes on the function of guarantor of human identity.

If the dog traditionally affirms man's sense of self, the ape is both man's double and Other who disrupts the stability of the human self. As far back as the medieval tradition, the ape does not fall in line with the other animals receiving their names from Adam, but takes up a position next to man, as the representative and the witness of man's

Fall.[8] According to Neumann, the ape represents man's double nature: his animal aspect, his sexuality, his fallibility, but also his (godlike) creative potential. If the culture-making aspect of man is determined, according to Aristotle's formula, by his capacity to imitate (*Ars simia naturae*), then the ape, as the *simulacrum* of the human, both redoubles and casts doubt on human creativity.[9] Whereas the dog, even in its profound understanding and recognition of its master, always remains an animal and a servant to man, the ape is at best a rebellious servant who refuses the unquestioned acknowledgement of the master's identity. The ape wears a mask that is both animal and human; identity and alterity become inseparably intertwined. Consequently, the ape represents the division inherent in human identity, the innocence of nature and the guilty freedom after the Fall, denoting also human separation from nature. The important point is that the ape is not simply the Other of culture and of man, but that it is *at the same time* a representative of the human self. Like the mirror in Lacan's scene of recognition, the ape mimics the gestures of the human, throwing back an image of identity and totality, while simultaneously disrupting the constitution of completeness. The ape as man's br/other is a 'fiction': it occupies the place in the 'mirror of nature' that signals recognition to the questioning human gaze, but that place is empty – as only the ape is able to see. What the gaze of the ape has to offer humanity is a twisted *anagnorisis*, an anamorphic reflection which questions identity instead of affirming it – which, in the final analysis, discloses death.

Prelude: the ape, the mirror and the desire to become human

Edgar Allan Poe's 'The Murders in the Rue Morgue' (1841) is a tale about analysis. In the narrator's description, analysis consists of two components: first, observation, and secondly, not so much deduction as identification, an intuitive merging with the Other: 'the analyst throws himself into the spirit of his opponent, identifies himself therewith, and not infrequently sees thus, at a glance, the sole methods (sometimes absurdly simple ones) by which he may seduce into error or hurry into miscalculation'.[10] This paradoxical quality of his analytical powers allows Dupin, alone among those concerned with the case, to transcend not only the realm of probability, but to go beyond the borders of the human – by 'identifying' with a perpetrator who is not human at all. Dupin, the nocturnal prowler, inhabits a liminal space of humanity: shunning daylight, he is at home in the city of the night which is described, not as a human habitat, but as a jungle with 'wild lights and shadows' (MRM 415). While Dupin is a supreme embodiment

of the human – with his intellect and his love of art – his humanity is also deeply precarious. It is this ambivalent positioning that predisposes him to see the animal agency behind the ferocious deed in the Rue Morgue.

The perpetrator is an orang-outang from Borneo who escaped from his owner, a sailor. The protagonists of the case thus negotiate in different ways the human–animal boundary. Dupin is a 'superman' who transcends ordinary humanity by his analytical powers, but who at the same time bears the mark of the nocturnal predator. The two victims are so defaced that they are almost unrecognisable as human beings; their mutilated bodies indicate the materiality and animality of the human. Finally, the ape turned killer approaches the border from the other direction. The hidden 'motive' of the butchery is the orang-outang's mimicry of human action, as transpires in the concluding scene. Having made all the correct deductions, Dupin sets a trap for the sailor and extorts a confession. The incident that spurred the ape onto its rampage was apparently trivial. One night, the sailor finds the animal escaped from its closet:

> Razor in hand, and fully lathered, it was sitting before a looking-glass, attempting the operation of shaving, in which it had no doubt previously watched its master through the keyhole of the closet. Terrified at the sight of so dangerous a weapon in the possession of an animal so ferocious, and so well able to use it, the man, for some moments, was at a loss what to do. He had been accustomed, however, to quiet the creature, even in its fiercest moods, by the use of a whip, and to this he now resorted. (MRM 442)

This mirror scene is a scene of both imitation and identification. In trying to shave, the orang-outang performs what has become the proverbial practice of its kind: it apes. The imitation of its master's habit thus reinforces, on the one hand, its ape-ness, its beastliness. The act of mimesis confirms that there is an 'original', a self to which the ape stands as Other. The ape's action would thus subscribe to the master's primacy, in other words, to human ascendancy. Yet the very incongruity of its anthropomorphic act is threatening: the danger emanates from the *in*-humanness of the ape. On the other hand, it is not just any random activity that is imitated. The ape tries to remove its facial hair – the mark of the beast – and thus not only to act, but to look like a human. By seizing a man-made tool, the ape crosses, albeit briefly, the human–animal boundary. In consequence, the established means of keeping it

under control are bound to fail; the captured animal is no longer to be cowed by the whip, and revolts against its gaoler. Ultimately, the source of danger is the ape's aspiration to humanity.

The ape's origin in Borneo raises the question of imperial traffic, not confined to animals but including exotic people. On a symbolic level, the orang-outang is a 'native' transplanted to the imperial metropolis. This aspect is born out by the emphasis put on the strange sound of the unknown voice. Witnesses of different nationalities, overhearing the crime from outside the locked room, insist that the voice was not that of a fellow countryman; the ape is thus marked as a stranger. Its identity is constructed in purely negative terms, as *not* belonging to any known nation, or more precisely, to any *European* nation. The exotic animal imported to be displayed at the *Jardin des plantes* – where the murderous orang-outang will actually end up – is linked to exotic people who shared a similar fate.[11] The ape, then, is in two senses an Other: as non-European and non-human. On both counts, the otherness is linked to excessive violence and irrationality (since no 'rational' motive for the murders, such as a desire for gain, can be detected). The acts perpetrated at the Rue Morgue are themselves marked as alien. No common Parisian criminal could have committed them, and, as Dupin proves at the end, no human being did commit them.

It is possible to see in the ape's imitation of its master an instance of colonial mimicry. In Bhabha's sense, the excess inherent in colonial mimicry is a sign of difference and recalcitrance in the colonial subject even as the subject tries to erase this difference through perfect imitation.[12] The ape in Poe's story certainly displays signs of excess and recalcitrance when it tries to shave Mme L'Espanaye and, in doing so, cuts her throat. In analogy to the mimic man, the ape both tries to be human and subverts its gesture of imitation by exaggerating it. Although the detective's work is directed at re-establishing the collapsed human–animal boundary, the ape's liminality cannot be successfully erased due to its prior designation as a foreigner, a designation that was possible only in anthropomorphic terms. The difference between human and animal thus remains problematic. Even before the publication of Darwin's evolution theory, Poe's story points to the tangle of (mis)recognition, identification and violence that will dominate post-Darwinian ape narratives. However, there is a crucial difference: the relation between human and ape is based on similarity, which allows the fatal act of mimicry. It is not yet conceived as genealogical. After Darwin, apes become man's relatives, a radically new configuration which is negotiated through the trope of the family.

The human–ape family romance

The monkey woman as abject mother

Despite occasional protestations by Darwin and others that there is a huge gap between the 'lowest races' of mankind and the 'highest animals', certain human groups are associated with apes both metonymically – on the grounds of geographical proximity – and metaphorically – on the grounds of similarity of phenotype.[13] Africa in particular is constituted in travel reports as well as in fictional texts as a space in which evolution was arrested and whose inhabitants are close to 'modern', i.e. European, man's ancestors and to the other branch of primates, the apes.[14] Africans – like the aboriginal inhabitants of Patagonia, Tasmania and Australia – belong to 'anachronistic space': they are not considered as European man's contemporaries, but as leftovers from an earlier evolutionary period. In this linkage between Africans and apes, women play an important role. On the one hand, women are themselves associated with evolutionary stagnation; on the other hand, the murky lore of racist tradition attributes to women a licentious desire for both apes and 'negroes', just as conversely these are endowed in European racist fantasies with prodigious prowess. Travel reports, like Du Chaillu's *Explorations and Adventures in Equatorial Africa*, ascribe stories of inter-species abduction and rape to Africans themselves, as in the report about Mbondemo women 'who have a lively fear of the terrible gorilla, in consequence of various stories current among the tribes of women having been carried off into the woods by the fierce animal' (EA 59).[15]

In Henry Rider Haggard's popular first novel, *King Solomon's Mines* (1885), a different aspect of the woman–ape link is explored: woman herself as an atavistic throwback, as a simian figure. It is the terrifying witch Gagool, the antagonist of the novel's four heroes, the narrator Allan Quatermain, the aristocrat Sir Henry Curtis who hired Quatermain for the expedition, his friend Captain John Good and their black servant Umbopa. These four have penetrated the isolated country of the Kukuana in search of Sir Henry's lost brother and the mysterious diamond mines of King Solomon. In the course of the story, a third goal emerges: the replacement of the usurper on the throne of the Kukuana, Twala, with the rightful king who is, as it turns out, their servant Umbopa, in fact Twala's elder brother Ignosi. As Anne McClintock has observed, the novel is 'a family romance of fathers, sons and brothers regenerating each other through the imperial adventure'.[16] It also turns on the negotiation of masculinity. While Quatermain, the self-deprecating, cautious narrator, and Good, the vain but reliable

naval officer, represent bourgeois images of manhood, both Curtis and Umbopa are noble warriors, ideal men based on archaic models of masculinity.

In this male family romance, women and the female play a crucial role: the heroes' quest is a journey through an explicitly feminised landscape in which King Solomon's mines represent the womb.[17] The guardian of the mines and therefore the heroes' main foe is Gagool, their principal helper and saviour is the young, beautiful Kukuana woman Foulata. Gagool, however, is not unequivocally female; on the contrary, it is her specific function in the narrative to represent boundary confusion, including the confusion of genders. She makes her first appearance as the four heroes are received in audience by the usurper King Twala: 'what appeared to us to be a withered-up monkey, wrapped in a fur cloak [...] crept on all fours into the shade of the hut and squatted down'.[18] The 'withered monkey' is Gagool, the king's advisor. She was instrumental in putting Twala on the throne; with the help of her magical powers, he succeeds in keeping tight control over his people. In the conflict between Twala and Umbopa, the witch supports her own party with all means, fair and foul, political and magical. Gagool is thus a direct threat to the explorers who support Umbopa's bid for the throne; she is dangerous because she holds power over life and death. But she is also threatening in a wider sense, as a 'third figure' defying all categories:

> I observed the wizened monkey-like figure creeping up from the shadow of the hut. It crept on all fours, but when it reached the place where the king sat, it rose upon its feet, and throwing the furry covering off its face, revealed a most extraordinary and weird countenance. It was (apparently) that of a woman of great age, so shrunken that in size it was no larger than that of a year-old child, and was made up of a collection of deep yellow wrinkles. Set in the wrinkles was a sunken slit, that represented the mouth, beneath which the chin curved outwards to a point. There was no nose to speak of; indeed, the whole countenance might have been taken for that of a sun-dried corpse had it not been for a pair of large black eyes, still full of fire and intelligence, which gleamed and played under the snow-white eyebrows, and the projecting parchment-coloured skull, like jewels in a charnel-house. As for the skull itself, it was perfectly bare, and yellow in hue, while its wrinkled scalp moved and contracted like the hood of a cobra. (KSM 147)

Gagool is category crisis personified, marking the point of fusion and confusion between different categories: gender, age, species. Consistently

referred to as 'it', she defies classification as either female or male. Immensely old and shrivelled, she has the size of 'a year-old child'. Most important, she dwells in the liminal region between animality and humanity. Not only is she ape-like, but the appearance of her skull points back to reptilian roots; only the 'fire and intelligence' of her eyes tie her to the human, but 'like jewels in the charnel-house'. This is indeed the last and crucial division she holds in suspense: that between life and death. So old that she seems nearly dead, Gagool appears to be immortal. The reaction of the narrator to this monkey-woman is one of almost physical horror and disgust. It is precisely the impossibility of classification that makes Gagool so overwhelmingly threatening. From the point of view of psychoanalytic theory, she is an 'abject' figure.

Julia Kristeva's definition of the 'abject' involves a critique of categorisation based on a binary subject-object opposition. The abject is precisely not the correlate of the subject as its opposite, but rather it challenges the subject through its amorphous and elusive status. It can only be experienced as physical disgust at food, dirt, vomit; the body is overwhelmed by this experience *before* symbolisation can set in. The abject reminds the human being of death, but not on a symbolic level: in this sense, the initial confrontation with a cadaver is not a symbolisation of death but an invasion of the senses that reminds us of death in a direct, unmediated way. The confrontation with the abject leads to an 'overthrow' of identity (*bouleversement violent de l'identité*); the abject simultaneously 'solicits' and 'pulverises' the subject: 'It is thus not lack of cleanliness or health that causes abjection but what disturbs identity, system, order. What does not respect borders, positions, rules. The in-between, the ambiguous, the composite.'[19]

The abject is necessary for the institution of order, both on the individual and on the social level, since boundaries emerge only through the process of abjection, of the negation of the undesirable, the unclean, of waste. Simultaneously, the abject undermines this process of differentiation: 'The abject is what threatens identity. It is neither good nor evil, subject nor object, ego nor unconscious, but something that threatens the distinctions themselves.'[20] In Kristeva's theory, the abject as the founding and subverting term of social order is closely connected to the female, in particular to the maternal. According to Kristeva, the maternal can be tolerated by the Symbolic order only in a sublimated form, as the motherhood of the Virgin; both the real *jouissance* and the real pain of the maternal body are repressed.[21] Women can therefore function both as the guardians of the rituals preserving the symbolic order and as its abject, as the representatives of its collapse.

Set against this background, the question of Gagool's connection to the female and the maternal assumes a great importance. McClintock interprets her as the 'Archaic Mother', on the one hand representing racial regression and bestiality, but on the other hand invested with an immense knowledge that gives her power over life and death. This power is demonstrated to the four strangers in the 'witch-smelling' ceremony, in which Gagool and her followers point out 'witches' – and Twala's adversaries – who are then instantly killed. The agents in this ceremony, the *isanusis*, are all female; they are clearly linked to 'low' animals and to death: 'women, most of them aged, for their white hair, ornamented with small bladders taken from fish, streamed out behind them', 'down their backs hung snake-skins, and round their waists rattled circlets of human bones, while each held in her shrivelled hand a small forked wand' (KSM 162).

From the travellers' point of view, this ceremony is transgressive in several respects: first, the power is in the hands of women; concomitantly, King Twala is feminised – he watches the ceremony approvingly but passively, like 'a black Madame Defarge' (KSM 165). Secondly, the law, in the sense of a regulated procedure that allows punishment only after individual guilt has been established, is substituted by 'superstition'; the selection of the victims is seemingly founded only on the ecstatic dance and the 'smelling' of the *isanusis*. And finally, any sense of proportion is swept away by the excess of the ceremony, in which over a hundred persons are killed. Consequently, Quatermain and his friends perceive the whole ritual as chaos, representative of the unnatural rule of a feminised usurper and an all-powerful woman.

McClintock attributes the fear experienced by the protagonists to the author: 'What appears to have appalled Haggard was the mortal consequences for men of the power of female generation.'[22] She links Haggard's 'psychosexual, class and racial paranoia' with the coloniser's economic fear that 'the secret of the production of mineral wealth in South Africa and thus the hoped-for regeneration of Britain, did indeed lie in the generative labor power of women',[23] a power symbolised in the novel by Gagool's exclusive knowledge about the access to the diamond mines. This interpretation is forcefully challenged by Laura Chrisman who accuses McClintock of overlooking Haggard's ambivalence toward both the colonial subjection of South Africa and the process of modernisation. In Chrisman's view, Kukuana society is not represented as degenerate, but on the contrary as a repository of traditional values that have been lost in industrialised Britain. Consequently, the white men's encounter with this society is a regenerative journey into humankind's past, a quest

for revitalisation through regression. In particular, Chrisman takes issue with McClintock's reading of Gagool as mother and threatening female power of generation: the appellation 'mother' used by the other *isanusis* should be understood purely as a sign of social seniority. Far from being the representative of female generation, Gagool should be read as the embodiment of desexualised power, even sterility:

> There is nothing in the text to associate Gagool with either literal or symbolic motherhood. On the contrary, I would argue that she is stationed, as are the other female *isanusis*, *outside* of femininity, marriageability, and the cycles of reproduction. She is member of a class that publicly controls these female activities instead of participating in them. And it is her *departure* from traditionally female 'generative power', including her membership of a politically powerful class, that allows Haggard to align her with the destructive forces of anti-colonialism, coded here as *ressentiment*. In other words, Gagool is not maternal enough, rather than being too maternal, for Haggard. She violates normative femininity and thus takes on demonic qualities.[24]

I would argue that Gagool is both: the desexualised representative of (illegitimate) power, and the *female* representation of border confusion. Through her, the 'wizened monkey', degeneration and the fusion of the human and the animal are linked to the female body, whereas the body of the male black warrior is set up precisely as non-degenerate. Umbopa is 'a magnificent-looking man: I never saw a finer native. Standing about six foot three high he was broad in proportion, and very shapely. In that light, too, his skin looked scarcely more than dark' (KSM 48–9). His physical magnificence is of course not a function of race but of class, more precisely his royal status: his innate nobility cancels the blackness of his skin. But then, all the Kukuana, with the exceptions of the hideous, ambivalently gendered Twala and the witches, are rather pale and Roman-looking: the nobility of this last unspoiled people corresponds to their appearance; their light skin is not the sign of hybridity, of a mixing with the colonisers, but on the contrary of their racial and cultural purity. The task set before the white explorers is to replace Gagool, the figure of hybridity and category confusion, with the rightful ruler Ignosi, the figure of purity and homogeneity. The novel ends with the re-establishing of the border between Kukuanaland and the outside, thus restoring the lost purity on both sides. To achieve this aim, Gagool has to be not only vanquished but eliminated without a trace.

As Chrisman rightly observes, 'the power of female generation' is most clearly invested in Foulata, in every respect Gagool's antipode: young, beautiful, nubile, gentle and kindly disposed towards the strangers, in particular to Captain John Good whom she nurses through a dangerous fever: 'Women are women, all the world over, whatever their colour. Yet somehow it seemed curious to watch this dusky beauty bending night and day over the fevered man's couch, and performing all the merciful errands of the sick-room as swiftly, gently, and with as fine an instinct as a trained hospital nurse' (KSM 246). As the embodiment of tender, loving care, Foulata is here clearly set up as the very opposite of the abject Gagool: she is the sublime mother.[25]

Although a representative of heterosexual femininity, Foulata is also pure, she transcends sexuality. As a sublime mother she sacrifices her comfort, her desires and her bodily needs for the beloved man/child, e.g as she stays motionless by Good's bedside for hours in order not to disturb him, so that 'when at last he woke, she had to be carried away – her limbs were so stiff that she could not move them' (KSM 247). This relation implies of course, that a real communication between her and the beloved object is precluded: she tends to his needs while he is unconscious, but retires as soon as he awakes – and indeed, they wouldn't understand each other, since neither of them speaks the other's language. As the sublime mother who sacrifices herself joyfully for the beloved man/child, Foulata chooses death in order to save Good and his friends Quatermain and Curtis from Gagool's murderous attempt. The deaths of the two women are interlinked; each dies in the way appropriate to her position in the Symbolic order. Gagool dies the proper death of the abject – she is crushed to death, so that not even a trace remains of her disgusting body:

> The door of rock is slowly closing down; it is not three feet from the floor. Near it struggle Foulata and Gagool. The red blood of the former runs to her knee, but still the brave girl holds the old witch, who fights like a wild cat. Ah! she is free! Foulata falls, and Gagool throws herself on the ground, to twist herself like a snake through the crack of the closing stone. She is under – ah, God! too late! too late! The stone nips her, and she yells in agony. Down, down, it comes, all the thirty tons of it, slowly pressing her old body against the rock below. Shriek upon shriek, such as we never heard, then a long sickening *crunch*, and the door was shut just as we, rushing down the passage, hurled ourselves against it. (KSM 280)

Gagool goes out not with a bang, but with a crunch, like a snake or an insect trodden on by the human heel. Foulata, on the contrary, is allowed to die the uplifting death of the beautiful woman, including a touching farewell from her beloved and last words in which she accepts her departure for a better world, and consoles those she leaves behind. If Gagool's death is the elimination of the abject, of boundary confusion, then Foulata's death is a further confirmation of the positive value of separation. She is glad to die, because she accepts the impossibility of mixed love, of racial miscegenation. 'Say to my lord, Bougwan, that – I love him, and that I am glad to die because I know that he cannot cumber his life with such as me, for the sun cannot mate with the darkness, nor the white with the black' (KSM 281–2). Despite their being polar opposites, in their death scenes the structurally similar roles of the two women become manifest: both signify in their very different ways the danger of boundary confusion. The crucial difference consists in Foulata's acceptance of purity and separation, even if the price is her own death. Gagool to the very last challenges this position. Both women have to be eliminated in order to free the way for the men's rebirth, their passage through the diamond mines, the location of the womb in the feminised landscape, where they have been locked in by Gagool.[26]

Significantly, after the demise of the two female figures it is Sir Henry Curtis who adopts the mother role: 'Had we been two frightened children, and he our nurse, he could not have treated us more tenderly. Forgetting his own share of miseries, he did all he could to soothe our broken nerves, telling stories of men who had been in somewhat similar circumstances, and miraculously escaped' (KSM 288). In the first part of their regenerative journey, the three white men had to prove their mettle as warriors in order to become true men; now, the most manly man, Curtis, displays maternal tenderness, whereas Quatermain and Good turn into children: 'Laying my head against Sir Henry's broad shoulder I burst into tears; and I think I heard Good gulping away on the other side, swearing hoarsely at himself for doing so' (KSM 288). The homosocial group of male adventurers has finally turned into a surrogate family from which women have been expelled, and in which they are no longer needed.

Monkey & Son: the hybrid children of the jungle

Gagool functions as a missing link, disturbing the binary order to the last. This powerful representation of the missing link as female is rather an exception. Most versions of the human–animal family romance have

a 'son' – human or simian – at the centre. Tarzan is of course the most famous human infant raised by apes; the reverse case can be found in Rudyard Kipling's short tale of Bimi, the orang-outang 'adopted' by the French animal trapper Bertran. 'Bertran and Bimi' (1891) explores the 'humanity' of the ape introduced into human society. The story, triggered by the violent behaviour of a captive orang-outang, is told to the anonymous first-person narrator by Hans Breitmann, a professional purveyor of 'wild beasts and ethnological specimens',[27] i.e. of both animals and people. His colleague Bertran raises Bimi as his son:

> Und dot man, who was king of beasts-tamer men, he had in der house shust anoder as dot devil-animal in der cage – a great orang-outang dot thought he was a man. He haf found him when he was a child – der orang-outang – und he was child und brother und opera comique all round to Bertran. He had his room in dot house – not a cage, but a room – mit a bed and sheets, und he would go to bed and get up in der morning und smoke his cigar and eat his dinner mit Bertran, and walk mit him hand in hand, which was most horrible. (BB 303)

The transformation is complete; Bimi is a human being in the body of an ape: 'He was *not* a beast; he was a man, and he talked to Bertran, und Bertran comprehend, for I have seen dem' (BB 303). This perfect father–son-dyad is disrupted as Bertran decides to marry 'a half-caste French girl – very pretty' (BB 304). Breitmann, wary of Bimi's jealousy, advises his friend to get rid of him, even to kill him. Bertran refuses this suggestion in the name of the family: 'Shall a child stab his fader? I haf fed him, and he was my child. Do not speak dis nonsense to my wife or to me any more' (BB 305). The marriage takes place; Bimi is relegated from the status of a son to that of a pet – he obeys the new wife and 'if she speak he will get her slippers' (BB 305). One day, Breitmann's worst fears are raised on hearing that Bimi has been left alone with the wife. He returns with Bertran; they have to break open the bedroom door:

> Haf you ever seen paper in der waste-basket, or cards at whist on der table scattered? Dere was no wife dot could be seen. I tell you dere was nodings in dot room dot might be a woman. Dere was stuff on der floor and dot was all. I looked at dese things and I was very sick; but Bertran looked a liddle longer at what was upon the floor und der walls, und der hole in the thatch. Den he pegan to laugh, soft and low, und I knew and thank Gott dot he was mad. (BB 306)

The actual events are left untold. Whether the 'stuff on der floor' consisted of the mutilated remains of the wife, unrecognisable traces like blood and torn-out hair – even exceeding the reduction of the female body to abject matter in 'The Murders in the Rue Morgue' – or whether the hole in the roof pointed to her abduction, remains unclear. No further action is taken until the return of Bimi, several days afterwards, as if nothing had happened, but with 'a long piece of black hair in his hands' (BB 306) and dried blood on his fur. On his part acting as if nothing had happened, Bertran, 'honey-sweet in his voice', invites him back to the house: 'For three days he made love to Bimi, pecause Bimi would not let himself be touched' (BB 307). On the third day, the ape returns to human ways – 'Bimi come to dinner at der same table mit us' – and is made drunk by his master:

> Und den Bertran he kill him mit his hands, und I go for a walk upon der beach. It was Bertran's own piziness. When I came back der ape he was dead, und Bertran he was dying abofe him; but still he laughed liddle und low und he was quite content. Now you know der formula of der strength of der orang-outang – it is more as seven to one in relation to man. But Bertran, he haf killed Bimi mit sooch dings as Gott gif him. Dot was der miracle. (BB 307)

Here we have a family romance gone horribly wrong, a multiply perverted oedipal scenario. The primary unit is not formed by mother and father, or mother and child, but by father and son. When the new wife intrudes upon this dyad, the negative Oedipus complex, the desire for the parent of the same sex, is not resolved in the regular way: the renunciation of incestuous desire and the identification with the parent of the same sex. Instead, Bimi decides to pursue his desire for the father and remove the obstacle, the wife. But then, of course, the family scene was perverted from the beginning *because the son was an ape*. Bertran is guilty of a monstrous vertical miscegenation, of a joining with the evolutionary ancestor, of a human–animal filiation. His horizontal miscegenation, the marriage with a half-caste woman, appears by comparison as a revision of the primary transgression. But the 'becoming human' of the animal cannot be undone.

What is at stake in the representation of the ape as son? Compared to the monkey woman Gagool as abject mother, Kipling's version is far less disturbing because in the final analysis Bimi remains an ape who only imitates human behaviour. If the story nevertheless produces a disconcerting effect, then this has to do with the negotiation of one

of the central, and most problematical, areas in the colonial context: the family. According to Anne McClintock, the Victorian idolisation of the family – the 'cult of domesticity' – was closely connected with the project of imperialism; indeed, the valorisation of the family formed the ideological basis for imperialist expansion. In particular, the trope of the 'Family of Man' was used to develop a strategy for vindicating the domination of other peoples. The image of the Western family with a benevolent but firm father at its head is projected onto mankind and linked to the idea of a linear evolution. Within this concept, the so-called 'primitive races' correspond to the 'infancy of mankind', whereas European peoples have reached full maturity – i.e. Europeans, especially the British, are seen as grown-ups in the Family of Man, and African, Australian and other aboriginal peoples are its children. The colonial administrator becomes the benevolent father whose task it is not only to govern and discipline his native subjects, but to educate them, to transform them into well-behaved and obedient children. If McClintock's thesis is true, than it is striking how many imperial romances show an image of the family as disrupted and incomplete, how many tell tales of orphans and adopted children, of dead mothers and lost fathers.

I suggest that British imperial fiction pursues the tensions and contradictions converging around the family in the colonial space. Some features are fairly representative of a wide range of texts such as John Buchan's *Prester John* (1910) and Rider Haggard's *King Solomon's Mines*: the protagonist is often alone; he – almost never a she – is either an orphan, or at least motherless or fatherless; or he was cast off by his family, or his return is barred until he has made his fortune. The protagonist's sojourn in or journey through foreign parts is a quest for a surrogate family, in particular for a father. He mostly succeeds in finding a 'father' and 'brothers': a homosocial group which constitutes the *ersatz* family. Typically, these narratives are androcentric. Women are marginal; the lost mother is present at best as a tender memory, a picture, a dream. Often, the female is present mainly as a feminised, hostile, barren, but also beautiful landscape. Finally, the protagonist finds himself in a paradoxical situation in relation to the two families he encounters in the imperial space: he is a son or brother within the surrogate family, but a father within the Family of Man. Even if the hero is just a lad barely out of school, he must become a responsible leader of the infantile natives, the children in the Family of Man.

This pattern, the replacement of the family of origin with a surrogate family, can be illuminated with the aid of Freud's concept of the

family romance to which I have already referred several times ('Der Familienroman der Neurotiker', 1909). According to Freud, the biological parents are perceived by the child as inadequate when compared to the ideal of omnipotent, infallible parents which dominated earliest infancy. As the child gets older, he – or she – begins to compare his own with other parents, and concludes that they are far from perfect, loving, just and reliable. The child begins to resent the parents, in particular the parent of his or her own sex. The boy develops a much stronger feeling of resentment against his father than the girl against her mother, and his efforts to liberate himself from the paternal influence are much more strenuous. In the next stage the child begins to fantasise that the parents are not really his or hers, and develops a desire to replace them by people who are socially superior. As soon as the child acquires sexual knowledge – namely, in Freud's terms, that *pater semper incertus est*, while the mother is *certissima* – the father alone is 'elevated', i.e. replaced by a superior father figure. The mother is accepted as the true progenitrix, but in consequence the child implicitly accuses her of adultery. Applied to imperial fiction, two possibilities emerge: the colonial space can either appear as a space where the family can be successfully reconstructed, where the family romance works out, albeit, as in *King Solomon's Mines*, as male only; or it is the space of the family's final destruction, as in 'Bertran and Bimi'. The mother, in contradistinction to Freud's account, is rejected in each case.

But even in *King Solomon's Mines* the reconstruction of the family is far from unproblematical. Here, the emergence of a new family is based on a set of exclusions and replacements. Mothers and, for that matter, brides are expelled and the family is reconstructed as a homosocial group of surrogate fathers and sons. This dismemberment of the family is pushed even further in 'Bertran and Bimi'. Because the family structure is coupled with human-animal filiation, the story does not end with the happy emergence of a viable surrogate family, but with its complete destruction. The family romance of Tarzan, the nobleman's son adopted by apes, bears far happier results.

In *Tarzan of the Apes* (1912), the first book of Edgar Rice Burroughs's immensely successful *Tarzan* series – an American product but strongly influenced by British adventure fiction – the individual family story is overlaid with the story of the imperial Family of Man. Tarzan's father, the Earl of Greystoke, is sent out on a delicate mission, to protect 'Black British subjects from the encroachments of another colonial power'.[28] As in Conrad's *Heart of Darkness*, the historical background is the exploitation of the Congo by the Belgian King Leopold.[29] On his way to his

new post, Lord Greystoke and his wife, Lady Alice, are marooned by mutinous sailors on an uninhabited African coast. Here, they are beset by a tribe of anthropoid apes, truly Huxleyan caricatures: 'if it was not a man it was some huge and grotesque mockery of man' (TA 16). From the start, the action of the novel is framed by Darwinian parameters: both the Greystokes' predicament and their son's life are a repetition of human evolution. Tarzan's parents perceive their 'struggle for survival' as a return to prehistoric times in which they have to prove themselves as 'the fittest' or perish:

> 'Hundreds of thousands of years ago our ancestors of the dim and distant past faced the same problems which we must face, possibly in these same primeval forests. That we are here today evidences their victory.
>
> 'What they did may we not do? And even better, for are we not armed with ages of superior knowledge, and have we not the means of protection, defense, and sustenance which science has given us, but of which they were totally ignorant? What they accomplished, Alice, with instruments and weapons of stone and bone, surely that may we accomplish also.'
>
> 'Ah, John, I wish that I might be a man with a man's philosophy, but I am but a woman, seeing with my heart rather than my head, and all that I can see is too horrible, too unthinkable to put into words.
>
> 'I only hope you are right, John. I will do my best to be a brave primeval woman, a fit mate for the primeval man. (TA 15)

Despite their evolutionary head start, their journey does not result in regeneration, but in death. Having given birth to a son, Lady Alice succumbs to the perils of the African coast. After an attack by the apes, she loses her mind; when her boy is one year old, she dies. Soon after, her disconsolate husband is killed by the apes. The baby is exchanged for a dead ape baby by the latter's mother, Kala. Kala is herself a missing link between anthropoid apes and humans, because she displays qualities that raise her above her species: intelligence and mother love. Consequently, she is well adapted to act as the human child's surrogate mother.

Kala is so strong and fierce that she succeeds in bringing up Tarzan in spite of her tribe's enmity against the pale, puny child. In fact, a female ape is a perfectly adequate replacement of the human mother. She suckles him, nurses him when he is sick, and protects him against the dangers of the jungle. Under the circumstances, Kala is much better able to cope

than Lady Alice would have been. What is more, she is able to love him, and Tarzan returns her love: 'That the huge, fierce brute loved this child of another race is beyond question, and he, too, gave to the great, hairy beast all the affection that would have belonged to his fair young mother had she lived' (TA 34). It is an inversion of the family romance. Although in this case Tarzan is *not* Kala's biological son, and not even of the same species, he never imagines that he has other, better parents. He has to be persuaded by the hard evidence of his own fingerprints, left behind on his toys in the cabin his father had built, that he is indeed the son of an English earl and his wife, and not of Kala, the anthropoid ape.

Despite her animal nature, Kala clearly is not an abject mother. Not once is she associated with bestiality in a degrading, disgusting sense. The animal aspect – her ferocity and physical strength – rather invests her with the power of the phallic mother – 'the child's fantasy of an omnipotent and absolutely powerful, sexually neutral figure'.[30] The phallic mother dominates the child's early life before the transference of her omnipotent status to the symbolic father in the Oedipus complex: 'The phallic mother is the fantasy of the mother who is able to grant the child everything, to be its object of desire, and in turn, to be the SUBJECT who desires the child as her object.'[31] Kala completely fulfils this fantasy; as a result, Tarzan never rejects her, which is tantamount to saying that he never leaves behind the pre-oedipal phase. In *Tarzan of the Apes*, the mother figure is split into the phallic mother Kala and the castrated, i.e. weak and powerless, absent mother Lady Alice, 'the poor, unhappy little English girl' whom Tarzan only comes to know as a lovely miniature portrait (TA 147). But in addition to her status as the incarnation of powerful motherhood, Kala is also, in Kristeva's term, the sublime mother who completely gives up her own desires, like Foulata in *King Solomon's Mines*. This becomes evident when she nurses Tarzan after he was dangerously wounded by a gorilla:

> Of medicine or surgery the poor thing knew nothing. She could but lick the wounds, and thus she kept them cleansed, that healing nature might the more quickly do her work. [...] No human mother could have shown more unselfish and sacrificing devotion than did this poor, wild brute for the little orphaned waif whom fate had thrown into her keeping. (TA 40)

The mother–son dyad is only disrupted when Kala is slain by a black warrior, Kulonga, whom then Tarzan kills in revenge. This is simultaneously Tarzan's first encounter with a human being, as a conscious adult at

least. Incidentally, Kulonga's tribe belongs to those 'black British subjects' Tarzan's father once set out to protect against Belgian encroachments. In a sense, the story has come full circle, but instead of acting as a fatherly protector of the black children in the Family of Man, Tarzan becomes their destroyer. Nevertheless, Kala's death and Tarzan's meeting with man mark a turning-point in the novel. Although Tarzan, on the one hand, clings to his family romance with the apes, on the other hand he now begins to severe his ties to the apes and to affiliate himself with human beings. To do this, he must repeat the journey his parents set out to complete, but travelling in the opposite direction: where their effort to become primeval humans, able to survive in the jungle, miscarried, Tarzan will succeed in scaling the evolutionary stages from ape to the pinnacle of evolution, the English gentleman.

This does not mean that Tarzan ceases to be an ape. Rather, he successfully merges his human heritage with his simian upbringing. He becomes a border figure in whom the best qualities of the gentlemen are blended with the strength, agility and acute senses of the ape – a particular type of *Übermensch*. Two different temporal models are superimposed: on the one hand, Tarzan remains forever a human–ape hybrid, he is stuck in a permanent anachronistic space; on the other hand, he follows the progressive trajectory of evolution by recapitulating at express speed the phylogenetic development of his species.

At the beginning stands Tarzan's growing awareness of his own difference: 'He was nearly ten before he commenced to realize that a great difference existed between himself and his fellows. His little body, burned brown by exposure, suddenly caused him feelings of intense shame, for he realized that it was entirely hairless, like some low snake, or other reptile' (TA 31). He fully recognizes the distance that separates him from his fellow apes as he sees his face for the first time mirrored in the water of a pool:

> In the higher land which his tribe frequented was a little lake, and it was here that Tarzan first saw his face in the clear, still waters of its bosom.
>
> It was on a sultry day of the dry season that he and one of his cousins had gone down to the bank to drink. As they leaned over, both little faces were mirrored on the placid pool; the fierce and terrible features of the ape beside those of the aristocratic scion of an old English house.
>
> Tarzan was appalled. It had been bad enough to be hairless, but to own such a countenance! He wondered that the other apes could look at him at all. […]

> And the little pinched nose of him; so thin was it that it looked half starved. He turned red as he compared it with the beautiful broad nostrils of his companion. Such a generous nose! Why it spread half across his face! It certainly must be fine to be so handsome, thought poor little Tarzan. (TA 31–2)

This is an intriguing inversion of the Lacanian mirror scene. It is not a scene of identification but of mis-identification: the 'I' perceives itself as Other. Instead of having his fragmented identity confirmed by the mirror as a unity, Tarzan sees the difference inscribed in his body. The encounter with the self as Other has two consequences. First, by taking the ape's features as the standard, the Western ideal of beauty based on the Greek aesthetic ideal, which is naturalised in other texts, is here called into question. Compare the way in which 'good negroes', e.g. Umbopa in *King Solomon's Mines*, are depicted not as 'negroid', but as Graeco-Roman warriors with thin lips, Roman noses, bronze-coloured skin and straight hair. The universality of this ideal is questioned by Tarzan's gaze which is at this stage the gaze of an ape. It shows that the Greek ideal is culturally constructed, that an ape society thinks that 'ape is beautiful'. However, this relativisation is immediately relativised in its turn by the narrator's comment about 'poor little Tarzan' who doesn't know better and who, as the 'aristocratic scion of an old English house', is 'naturally' superior to his companion. The narrative then goes on to cover up this brief moment of insecurity, this displacement of the anthropocentric gaze, by reworking the puny white ape as the epitome of classical male beauty: as he grows up, Tarzan becomes 'a Greek god' (TA 86), a 'god-like man' (TA 137), a 'woodland demi-god' (TA 147) or a look-alike of the 'best of the ancient Roman gladiators' (TA 86).

The second consequence of the inverse mirror scene is to set in motion Tarzan's reflection about his identity, and his subsequent disjunction from the apes. As Lacan has observed concerning Köhler's experiments with chimpanzees, apes do not engage with their mirror reflection, whereas for human infants it initiates the process of identity formation. Human identity is marked by an internal division, a mis-identification. Such is the case with Tarzan, who interprets his mirror image as an 'Other', relative to the normative ideals of apehood. His simian playfellow is not subjected to this division, he is one with his body, not gazing at his reflection but fully immersed in the satisfaction of his needs, quenching his thirst in the pool. But the inner split turns to Tarzan's advantage. When Sabor, the lioness, who had crept up unobserved, utters her 'awful scream' and springs upon them, the little

ape is paralysed, while Tarzan, 'whose higher intelligence resulted in a quickness of mental action far beyond the power of the apes' (TA 33), hurls himself into the water and escapes. This action marks his first voluntary departure from ape behaviour and the beginning of his search for a human identity.

Tarzan retraces the steps of human evolution. He starts out as a deficient ape: slower, smaller, weaker and uglier. Through his adolescence, he then recapitulates the phylogenetic stages of development: from anthropoid ape, he moves on to the status of primeval man, to savage, to uneducated white man, to civilised man, to nobleman and finally to superman who, uniting the ape's physical superiority with human intelligence, overreaches his ordinary fellow-humans. Important steps on this evolutionary journey are the intellectual recognition of the difference between humans and apes, the recognition of racial difference, the acquisition of tools and, thereby, of culture, the acquisition of language (first written and then spoken), the entry and acceptance into human society, and finally the forming of a heterosexual bond. Tarzan achieves this final aim when he encounters the young American Jane Porter who is marooned near his parents' hut, incidentally accompanied by William Cecil Clayton, Tarzan's cousin and heir-apparent to the incumbent Lord Greystoke. Against these two, Tarzan's full humanity is negotiated. His cousin is a well-bred aristocrat who has all the advantages of civilisation on his side. But in the testing ground for male fitness, the African jungle, he is as helpless as Tarzan's father before him. He gets lost and has to be saved by Tarzan from an attacking lion. In the terms of survival ability, Tarzan is certainly the fitter of the two – on his own ground.

Tarzan and Jane's love story is an enactment of his father's fantasy about the return to a primeval stage. Our hero at this point is still 'Tarzan of the Apes', the ruler of the jungle, equipped with an innate chivalry but completely unaware of all the refinements of modern civilisation, like the habit of cooking one's meat before eating it. But the mere sight of Jane Porter reveals everything he needs to know about men and women: 'He knew that she was created to be protected, and that he was created to protect her' (TA 118). His protection is soon called for, as the ape Terkoz abducts Jane with the intention of inflicting on her a fate worse than death. Whereas Clayton is completely helpless, Tarzan understands thanks to his double nature – 'the ape that was in him by virtue of training and environment, combined with the intelligence that was his by right of birth' (TA 135) – what has happened and immediately takes up the pursuit. He soon overtakes them and challenges Terkoz to a 'primeval-like

battle': 'Like two charging bulls they came together, and like two wolves sought each other's throat. Against the long canines of the ape was pitted the thin blade of man's knife' (TA 137). Pure animal strength is matched against animal training combined with a primitive human technology – and in this re-staging of an evolutionary rivalry between two species, the superior human wins. At the moment of Tarzan's victory, however, Jane on her side regresses to a primitive stage:

> Jane Porter – her lithe, young form flattened against the trunk of a great tree, her hands tight pressed against her rising and falling bosom, and her eyes wide with mingled horror, fascination, fear, and admiration – watched the primordial ape battle with the primeval man for possession of a woman – for her.
>
> As the great muscles of the man's back and shoulders knotted beneath the tension of his efforts, and the huge biceps and forearm held at bay those mighty tusks, the veil of centuries of civilisation and culture was swept from the blurred vision of the Baltimore girl.
>
> When the long knife drank deep a dozen times of Terkoz' heart's blood, and the great carcass rolled lifeless upon the ground, it was a primeval woman who sprang forward with outstretched arms toward the primeval man who had fought for her and won her. (TA 137)

The heterosexual bond is established on the primeval level of desire, bodily drives, fight for survival, primitive masculinity and femininity – and it works unproblematically only on this level. From the very beginning, Tarzan and Jane have to come to terms with the different demands of his apehood and her civilisation. Alone with Jane, Tarzan has 'a problem the like of which he had never encountered', namely whether to rape Jane or not, 'and he felt rather than reasoned that he must meet it as a man and not as an ape': 'True, it was the order of the jungle for the male to take his mate by force; but could Tarzan be guided by the laws of the beasts? Was not Tarzan a Man? But how did men do? He was puzzled; for he did not know' (TA 144).

In a somewhat paradoxical move Tarzan now has to suppress nurture and activate nature, i.e. forget his upbringing as an ape and remember his aristocratic heritage, in order to learn civilised behaviour towards a woman. He realises what he has to do in three steps: by comparing his own intentions with those of Terkoz; by observing Jane's behaviour that has returned, after the first 'primeval' embrace, to the reserve of the modern American girl; and finally, by remembering what his father's

books taught him about men and women. This reeducation process is entirely successful:

> Now, in every fiber of his being, heredity spoke louder than training.
>
> He had not in one swift transition become a polished gentleman from a savage ape-man, but at last the instincts of the former predominated, and over all was the desire to please the woman he loved, and to appear well in her eyes. (TA 149)

The climb up the evolutionary ladder has been completed. But due to the double temporal structure of the novel, the linear progress Tarzan makes does not result in his emergence from the anachronistic space. Although he is a gentleman now, he also remains an ape. As Ruth Mayer has argued, the enactments of encounters between humans and primates are always charged with the symbolism of cultural contact and race relations; but the chronological and spatial structure differs in 'ape-man stories' from other imperial narratives:

> There is more at stake for the protagonists of the ape-man story – the ape-man does not transgress boundaries to find out about the world but can be seen (re)drawing boundaries to safeguard his self. Tarzan may opt for manhood or apeness, or remain precariously poised between both stages – but he can never step as completely outside the jungle as Haggard's Quatermain, who leaves Kukuanaland behind at the end of *King Solomon's Mines* to experience 'real' civilization for a change. Whereas colonial adventures speculate about first contact from a safe distance, for ape-man stories contact has always already taken place: there seems to be no way back and no way out.[32]

In other words, chronologically the cross-cultural, or rather interspecies, encounter is an *a priori* fact for the ape-man: his own body is the contact zone. Consequently, Tarzan carries the 'jungle within' into civilisation. This is the dilemma in which his courtship remains caught, even as he travels to America to claim his woman: '"This is not an African jungle," [Jane] said. "You are no longer a savage beast. You are a gentleman, and gentlemen do not kill in cold blood." "I am still a wild beast at heart," he said, in a low voice, as though to himself' (TA 209). When he sees Jane's hesitation, Tarzan renounces her: 'I see now that you could not be happy with – an ape' (TA 210). She agrees to marry William Clayton as the most compatible mate, 'a man with social position and culture such as she had been taught to consider as the

prime essentials to congenial association' (TA 215–16). Unwittingly, she rejects the true Lord Greystoke for the pretender. By then, an analysis of fingerprints has proven beyond a doubt that Tarzan is John Clayton's son and the rightful Earl of Greystoke. At this point, the narrative completely reverses its till then unswerving trajectory, Tarzan's quest for his paternal heritage and human status. Instead of claiming his title and his inheritance, he reverts to the simian family romance. Asked how he came to be in the jungle, he answers: 'I was born there. […] My mother was an Ape, and of course she couldn't tell me much about it. I never knew who my father was' (TA 218).

Human–simian transformations of the body

The human–ape relation as reverse colonisation

The witch Gagool is abject because she epitomises boundary confusion between the human and the simian, the male and the female, the old and the young, the dead and the living. This ambiguous state forms the basis of her power, but it is precisely her ambiguity that renders her sickening in the eyes of the white explorers. Despite her unsavoury qualities, Gagool is a powerful presence in the novel. In its ambivalent treatment of the abject – between fascination and repulsion – *King Solomon's Mines* was not unique. According to Kelly Hurley, late nineteenth-century literature was fascinated with 'Gothic bodies', bodies that transgressed the human and evoked disgust. Drawing both on Kristeva's theory of abjection and on Deleuze and Guattari's concept of becoming-animal, Hurley develops the notion of the 'abhuman':

> The abhuman subject is a not-quite-human subject, characterized by its morphic variability, continually in danger of becoming not-itself, becoming other. The prefix 'ab-' signals a movement away from a site or condition, and thus a loss. But a movement away from is also a movement towards – towards a site or condition as yet unspecified – and thus entails both a threat and a promise.[33]

The engagement with the abhuman is thus not simply a rejection of the transgressive, polymorphous Other, but an affective oscillation between a nostalgia for the fully human and a blissful shedding of human bondage. Hurley connects this ambivalence to the traumatic effect of Darwinism: 'Gothic fiction, working in the negative register of horror, brought this sense of trauma to vivid life, supernaturalizing both the specific content of scientific theories and scientific activity in general.'[34]

Texts like Haggard's *King Solomon's Mines* and *She*, Stoker's *Dracula* and many other, less well known novels, both expressed and contained the anxieties evoked by the fluid post-Darwinian body, in this sense managing 'the anxieties engendered of scientific innovations by reframing these within the non-realistic, and thus more easily distanced, mode of gothicity'.[35]

The relationship between scientific propositions and literary texts is not simply that between the active formulation of a theory and its passive reception and mediation in literature. Rather, literary texts themselves actively intervene in the cultural debate and play an important role in the symbolic negotiation of scientific theories. In this way, Victorian Gothic fiction 'aggravates' cultural anxieties in a productive way: 'Darwinism opened up a space wherein hitherto unthinkable morphic structures could emerge; the *fin-de-siècle* Gothic occupied that space and pried it open further, attempting to give shape to the unthinkable.'[36] Precisely because these texts work in the fantastic, non-realistic mode, they can address irrational fears and play out the excessive consequences of Darwinism; they can transgress socially sanctioned, liberal ideologies of subjectivity, identity and progress, and even endorse that which threatens stable identity and social cohesion:

> The plot which the genre reiterates is of the becoming-abhuman of the human subject, with abhumanness theorized in the registers of bodily, subjective, and sexual identity. But the genre is profoundly ambivalent towards its own object of obsession. As a result, it works to develop narrative strategies which enable simultaneous engagement with and revulsion from its topic – strategies whereby to multiply and aggravate instances of abhumanness, but also to occlude them.[37]

In the wider context of imperial fiction that repeatedly intersects with the Victorian Gothic proper – Patrick Brantlinger has coined the term 'imperial Gothic' for texts combining imperialist ideology with a fascination for primitivism and occultism[38] – the fascination/repulsion of the abhuman body is overlaid with the ambivalence of colonial desire. As both Homi Bhabha and Robert J.C. Young have observed, colonial desire not only disrupts the stable hierarchies that imperial discourse tries to establish, but also 'infects' the coloniser with the affects – anxieties of perversion and degeneration, fantasies of dissolution and fulfilment – that he projects on the colonised. This psychological 'reverse colonisation' is expressed in some texts that negotiate the

human–ape relation by simianising the Western body. All at once, it is not a member of the 'lowest races' who is ape-like, but European man who is literally turned into an ape: 'Non-European bodies and cultures, of course, served as already-abhuman markers against which the extent of European degeneration could be measured, but these, ironically, remained stable points of reference. The European body by contrast was a body in flux, the body upon which the forces of entropy worked most visibly.'[39]

A prime example of this return of the repressed in the wrong place, the eruption of the irrational and animal in the well-regulated, male Western body, is Kipling's story 'The Mark of the Beast' (1890). In this narrative, set in Northern India on New Year's Eve, the anonymous first-person narrator and his friend Strickland, a policeman, accompany Fleete, an inebriated Englishman who is on a visit in the district. On their way home from the British club, they pass the temple of Hanuman, the Monkey God: 'Before we could stop him, Fleete dashed up the steps, patted two priests on the back, and was gravely grinding the ashes of his cigar-butt in to the forehead of the red stone image of Hanuman' (MB 242). Unexpectedly, this outrage is not immediately avenged by the incensed worshippers of the God; the only thing that happens is that a leper, called the 'Silver Man' because of his white, diseased skin, embraces Fleete.

The next day, Fleete has a mark on his breast resembling the pattern on a leopard's skin. Gradually, he begins to behave in the strangest way: he devours bloody meat, walks on all fours, wants to sleep during the day and to spend the night in the open air; the horses panic at his approach. The narrator and Strickland realise that he is turning into a wild animal: 'Fleete could not speak, he could only snarl, and his snarls were those of a wolf, not of a man. The human spirit must have been giving way all day and have died out with the twilight. We were dealing with a beast that had once been Fleete' (MB 251). He becomes so ferocious that he has to be tied up. Finally, his life is despaired of. Since all rational counter-measures, like medical aid, prove inefficacious, Strickland and the narrator decide to fight the supernatural with the supernatural: they capture the Silver Man and torture him until he agrees to take the spell off. Miraculously, Fleete recovers; he has no memory of the events of the previous days.[40]

Kipling's short story foregrounds the vulnerability of the Western body. A simple touch by one of the lowest members of the colonised, a leper, suffices to destabilise the identity of a member of the ruling class. The ape-god Hanuman represents the supernatural power behind

this process. However, it is striking that Fleete is not transformed into an ape. Rather, the breakdown of natural categories, of the distinction between human and animal, opens up a phantasmagoric array of different animals somehow involved in Fleete's transformation. The Silver Man, himself a figure at the edge of humanity, mews like an otter. Fleete bears the mark of a leopard but then turns into a wolf, or rather behaves like a wolf, since the shape of his body does not change.

Fleete's transformation can be read in the light of Deleuze and Guattari's becoming-animal, since it evades the linear logic of evolutionary regression, but is rather structured like a rhizomatic dispersion of different animal attributes through the body and the text. The becoming-animal takes place, as Deleuze and Guattari claim, through contagion rather than through heterosexual reproduction or linear regression; it is heterogeneous rather than binary.[41] However, in this instance becoming-animal is not associated with a joyful overcoming of the strictures that bind the human subject – or at least not from the perspective of the story's two main protagonists, the narrator and Strickland. The invasion of Fleete's body is perceived by them as a catastrophe, as a terrible threat to the order imposed by the rational West on the magical and chaotic East. From their point of view, this order has to be restored at any price, and this means, at the price of the utmost brutality and self-degradation of the rulers.

Although the category crisis – caused by Fleete's primary transgression into Hanuman's territory and the counter-transgression against the Western body through oriental magic – can be reversed, the events result in a profound destabilisation of the colonial relationship. The temporary overturning of power relations leaves the representatives of colonial rule helpless before the transformed body of their friend, until Strickland reaches the decision to get hold of the Silver Man. Now, colonial power reveals its brutal face; its violence surpasses the understated but efficacious gesture of Hanuman's followers, highlighting precisely the Englishmen's moral failure in the colonial situation. The 'poetic justice' of Fleete's punishment stands in sharp relief against the suggested brutality of the torture scene. The Englishmen are locked in the apparent necessity of brutality – they have to degrade themselves to a bestial level, thereby betraying what British rule is supposedly all about. As the narrator comments, they 'had disgraced [themselves] as Englishmen for ever' (MB 258). Although they have restored Fleete to human status, they have themselves become bestial. His physical regression is replaced by an even more threatening cultural regression endangering not only an individual body, but the colonial body politic – the mutation from a civilised to a barbarian state.

Stephen Arata's observations on *Dracula* as a reverse colonisation narrative are illuminating for Kipling's story as well. Bram Stoker's *Dracula* (1897) explores the reverberations of colonial guilt and fear by transplanting issues of regression from the imperial fringe to the heart of the metropolis:

> Versions of this story recur with remarkable frequency in both fiction and nonfiction texts throughout the last decades of the century. In whatever guise, this narrative expresses both fear and guilt. The fear is that what has been represented as the 'civilized' world is on the point of being colonized by 'primitive' forces. [...] In each case, a terrifying reversal has occurred: the colonizer finds himself in the position of the colonized, the exploiter becomes the exploited, the victimizer victimized. Such fears are linked to a perceived decline – racial, moral, spiritual – which makes the nation vulnerable to attack from more vigorous, 'primitive' peoples'.[42]

In *Dracula*, the reverse colonisation takes place in the form of a carefully planned invasion of Britain by the Transylvanian count. In 'The Mark of the Beast', by contrast, the 'war theatre' is the colony; the threat to the 'motherland' is therefore less immediately apparent, but the connection to the colonial situation is all the more evident. In particular, the second aspect mentioned by Arata as the motivation behind these narratives, colonial guilt, plays an important role in Kipling's story. According to Arata, in 'the marauding, invasive Other, British culture sees its own imperial practices mirrored back in monstrous forms'.[43] Consequently, reverse colonisation narratives 'contain the potential for powerful critiques of imperialist ideologies, even if that potential usually remains unrealized. As fantasies, these narratives provide an opportunity to atone for imperial sins, since reverse colonization is often represented as deserved punishment.'[44]

The person who deserves punishment in 'The Mark of the Beast' is certainly Fleete, the boyish, materialistic and insensitive intruder on the precarious colonial scene. The narrator and Strickland, on the other hand, are highly aware of the complex rules of Indian society, and in particular the sensitivity of Indian religion. These 'good' colonisers, who care and know about the society 'entrusted' to their care, deliberately sacrifice themselves, or rather their honour as Englishmen, for the drunken lout who caused all the trouble. The question of colonial guilt is thus addressed in the narrative, but at the end it is occluded again by the story of white men's solidarity and noble self-sacrifice.

What is finally disregarded is the fact that the real victim is the Silver Man. Neither of the honourable men in the story hesitates to torture him, and the ensuing breakdown of civilisation is described as tragic for the torturers; the further fate of their victim is passed over in silence. Although this narrative of reverse colonisation engages with colonial fear and guilt, it remains complicit with the imperial project.

In Arthur Conan Doyle's 'The Adventure of the Creeping Man' (1905), the danger of simianation is imported from the colonial space, but simultaneously, it already resides within the metropolis. Sherlock Holmes's latest client, Professor Presbury's assistant, describes the strange behaviour of his employer:

> I could see that something was coming along the passage, something dark and crouching. Then suddenly it emerged into the light, and I saw that it was he. He was crawling, Mr. Holmes – crawling! He was not quite on his hands and knees. I should rather say on his hands and feet, with his face sunk between his hands. Yet he seemed to move with ease. I was so paralyzed by the sight that it was not until he had reached my door that I was able to step forward and ask if I could assist him. His answer was extraordinary. He sprang up, spat out some atrocious word at me, and hurried on past me, and down the staircase. I waited about for an hour, but he did not come back. It must have been daylight before he regained his room.[45]

Apart from his recent infatuation with the young daughter of a colleague, the professor has always been a pillar of rectitude. His increasingly odd actions – which include teasing his dog and crawling up a wall in bat-like (i.e. Dracula-like) fashion – are at first inexplicable. They seem, however, related to a secretive trip to Prague, and the subsequent reception of mysterious letters and parcels. The only other clue is his gain in energy and vitality. As Sherlock Holmes correctly deduces, all of these changes were caused by a rejuvenating drug the professor obtained from the Prague scientist Lowenstein – a drug based on a serum extracted from the glands of a Himalayan langur, a climbing monkey. The scientist's name and location are reminiscent of Rabbi Löw, the creator of the Golem. Together with the references to Dracula, the narrative thus constructs a space of the uncanny Other which is situated in Eastern Europe, but from which subversive 'germs' intrude into the ordered English realm. The space of the Other is pushed even further to the East by the specific designation of the langur's provenance, 'the Himalayan slopes' (ACM 1082). Again the story presents a case of reverse colonisation through 'infection,' but this

time, the 'Other place' is doubled. The magic of the Far East is coupled with the alchimistic tradition of the European East.

The drug succeeded in restoring Presbury's youth, but it also instilled in him the characteristics of the monkey. As a cross between a professor and a langur, Presbury is not a purely metaphorical border figure, but a literal, biological hybrid, produced however not through cross-fertilisation but through infection (again, Deleuze and Guattari spring to mind). Consequently, the civilised ape as a representation of liminality is displaced from the symbolical level to the biological. The partial loss of the erect gait signifies the 'patient's' moral degradation and physical reversion to a lower state – he literally creeps down the evolutionary ladder. His transformation into an animal is thus not, as in Fleete's case, heterogeneous and rhizomatic, but regressive. At the same time, Presbury's case seems even more threatening to the body politic, first because it occurs in the home country and not on the colonial periphery, and secondly because it is associated by Holmes with an epidemic. As the detective points out, similar manipulations may recur and lead to widespread degeneration: 'Consider, Watson, that the material, the sensual, the worldly would all prolong their worthless lives. The spiritual would not avoid the call to something higher. It would be the survival of the least fit. What sort of cesspool may not our poor world become?' (ACM 1082–3)

In Sherlock Holmes's assessment, the negative meaning of degeneration is apparently clear, but in fact, the cultural value of the term is quite ambivalent. In Professor Presbury's case, regression to an animal state is associated with increased vigour, vitality and agility. Indeed, 'the survival of the least fit' is a paradox: the fittest, i.e. those best adapted to their environment, will always survive. If an urban, industrialised environment demands the resurgence of buried animal characteristics, then those who are able to access their animal side *are* the fittest. The possible price of this regeneration through degeneration is indeed that the world may become a 'cesspool'. In a world ruled by brute strength, ethical and cultural refinement would have to be abandoned.

On the surface, Presbury's return to animality is certainly repudiated. His apeness is linked to sexual perversion, as the possibility of incestuous desire for his daughter is evoked. Finally, he is brought down in the most degrading fashion, not by Holmes's superior intellect, but by his own dog breaking lose and almost killing his master and tormentor. However, the opposition between a sound intellect and robust health on the one hand and moral depravity and physical degeneration on the other hand is far from clear-cut. Although Presbury's case is the story of

a fall, his acceptance of passion, i.e. of his own animality, seems rather attractive compared to the prim propriety of those who are concerned with containing his excesses. Moreover, Sherlock Holmes's final statement is rather contradictory. Certainly his attribution of a desire for longer life to 'the worthless' and a concomitant death wish to intellectuals does not meet the case. Professor Presbury is also a man of the mind who retains his intellectual vigour despite his physical transformation. He is at the same time 'sensual,' 'material' and 'worldly' – motivated by his sexual desire for a young woman – and 'spiritual,' part of an intellectual elite. By his regression into an ape, the 'racial stock' of the British body politic is not impaired, but on the contrary reinvigorated.

In *Strange Case of Dr Jekyll and Mr Hyde* (1886), Dr Jekyll's wish for transformation is linked to sexual desire as well. His dominant characteristic is 'a certain impatient gaiety of disposition' which, together with 'my imperious desire to carry my head high', results in a split personality: 'I concealed my pleasures [...] I stood already committed to a profound duplicity of life.'[46] Jekyll's research is thus not motivated by a thirst for knowledge or the wish to benefit mankind – as was the case with his literary predecessor Victor Frankenstein – but by a stereotypical Victorian hypocrisy, wrought to an extremely high pitch. He is led to discover two things, first the internal division of man's psyche, 'that man is not truly one, but two', and even, as future research may show, 'that man will be ultimately known for a mere polity of multifarious, incongruous and independent denizens' (JH 82). This heterogeneous polity of the psyche is more than a metaphor; it is to be taken literally.[47]

Secondly, Jekyll discovers the plasticity of the Gothic body. Man's physical frame is inherently unstable and malleable: 'I began to perceive more deeply than it has ever yet been stated, the trembling immateriality, the mist-like transience, of this seemingly so solid body in which we walk attired' (JH 82). Jekyll finds a means to translate the psychological split into a division of the body, by seizing on the innate instability of the post-Darwinian, Gothic body. As we have already seen in Darwin's description of atavisms and Lombroso's theory of criminals as evolutionary throwbacks, physical formations belonging to a remote past can suddenly re-emerge. In late nineteenth-century literary texts, this possibility is both condensed and dramatised. Hyde is thus not just the repressed evil side of Jekyll, but also a representation of his 'troglodytic' or simian evolutionary history.

The shocking aspect of *Dr Jekyll and Mr Hyde*, however, is not only the emergence of an atavistic body, but the fact that this abhuman body is *not* projected onto an exotic Other. As Kelly Hurley has

observed, '[a]bhuman becomings were always possible, according to the Darwinist or pseudo-Darwinist models on which Lombroso based his work, but not for oneself: atavists were defectives, misfits, criminals, riffraff – anomalies against which the "fully human" subject stood out in relief'.[48] But in Stevenson's tale, the abhuman lurks within the *homme sensuel moyen* Dr Jekyll, 'a large, well-made, smooth-faced man of fifty, with something of a slyish cast perhaps, but every mark of capacity and kindness' (JH 43), an established scientist, a popular host, a well-known philanthropist. He is both a human subject and its negation, the abhuman, simian throwback. Here, the function of the missing link does not consist in reinforcing distance by being projected on an exotic Other, but in 'seeking out connection': 'No longer is the monsterized missing link safely distanced as a past, a myth, a phantasm. In this fiction he is much of man, now, urging his way through the skin and mind of sedate city-dwellers: the return of the repressed, not of the erased or the extinct.'[49] However, the story is not just concerned with the return of the repressed aspects of the psyche, but, as Jekyll's own insistence on the instability of the body shows, with the physical re-emergence of the evolutionary past.

From the beginning, Jekyll's *alter ego*, the mysterious Mr Hyde, is introduced as an uncanny missing link. The sense of simultaneous strangeness and familiarity, of an unnameable deformation is expressed in Mr Enfield's narrative:

> He is not easy to describe. There is something wrong with his appearance; something displeasing, something downright detestable. I never saw a man I so disliked, and yet I scarce know why. He must be deformed somewhere; he gives a strong feeling of deformity, although I couldn't specify the point. He's an extraordinary looking man, and yet I really can name nothing out of the way. No, sir; I can make no hand of it; I can't describe him. And it's not want of memory; for I declare I can see him this moment. (JH 34)

Jekyll will later explain the repugnance others feel on meeting Hyde precisely by his *not* being a border figure. Whereas all other humans are, on a moral level, hybrid, Hyde stands out as a representation of an unalloyed, albeit negative, purity: 'because all human beings, as we meet them, are commingled out of good and evil: and Edward Hyde, alone, in the ranks of mankind, was pure evil' (JH 85). Different witnesses who meet Hyde connect him with moral or even supernatural evil, with Satan (JH 31, 41).

But equally striking are references to Hyde's racial otherness and to his simian or atavistic nature. The first witness, Mr Enfield, denies his humanity and implicitly links him to Eastern, destructive idolatry: 'It wasn't like a man; it was like some damned Juggernaut' (JH 31). Hyde is described as swarthy, bearing himself with a 'black sneering coolness' (JH 32) – moral attitude and outward appearance merge in the adjective 'black.' Jekyll's servant Pool speaks of him as 'more like a dwarf' (JH 67), 'that masked thing like a monkey' (JH 68); Jekyll himself mentions his *alter ego*'s 'ape-like tricks' (JH 96) and 'ape-like spite' (JH 97). Hyde's hand is 'lean, corded, knuckly, of a dusky pallor, and thickly shaded with a swart growth of hair' (JH 88) – it looks like the hand of a labourer, it is simultaneously 'dusky' and pale, i.e. racially double-coded, and hairy like the limb of a humanoid ancestor or an ape: Mr Hyde is Other in terms of class, race and species. The most precise description is given from the perspective of Mr Hyde's antagonist 'Mr Seek', the lawyer Utterson:

> Mr Hyde was pale and dwarfish; he gave an impression of deformity without any nameable malformation, he had a displeasing smile, he had borne himself to the lawyer with a sort of murderous mixture of timidity and boldness, and he spoke with a husky, whispering and somewhat broken voice, – all these were points against him: but not all of these together could explain the hitherto unknown disgust, loathing and fear with which Mr Utterson regarded him. 'There must be something else, said the perplexed gentleman. 'There *is* something more, if I could find a name for it. God bless me, the man seems hardly human! Something troglodytic, shall we say?' (JH 40)

By calling Hyde 'troglodytic', Mr Utterson specifies his 'non-human' appearance as 'not-yet-human', as a regression to a seemingly conquered past. In this past, the human being is still pre-social; he is a supreme egoist who has not yet mastered his drives and passions. The murder of Sir Danvers Carew is explicable not just as pure evil, but as the act of a being who has not learned to adjust to social constraints, who is governed by the pleasure principle. Therefore, the occasion and the deed appear to be totally at odds: all Carew did was to inquire politely after his way. If the victim represents civility, considerateness, and – as an MP – the subordination of the individual under a social contract, Hyde personifies an asocial lack of self-restraint.

The murder is described as an uncontrolled eruption: 'all of a sudden he broke out in a great flame of anger' (JH 46–7), he 'broke out of all

bounds' – 'and next moment, with ape-like fury, he was trampling his victim under foot, and hailing down a storm of blows, under which the bones were audibly shattered and the body jumped upon the roadway' (JH 47). At this moment, Hyde becomes an ape, i.e. he sheds the last human inhibitions and surrenders to the joys of rage and destruction. From his own point of view – rendered in Jekyll's final statement – the violence is experienced as pure bliss, as *jouissance*: 'Instantly the spirit of hell awoke in me and raged. With a transport of glee, I mauled the unresisting body, tasting delight from every blow; and it was not till weariness had begun to succeed that I was suddenly, in the top fit of my delirium, struck through the heart by a cold thrill of terror' (JH 90–1). Not remorse, but the kicking in of the reality principle – care for his own safety – brings the 'delirium' to an end. The joy Hyde experiences during his senseless attack on Carew points to the ambivalent value of degeneration in literary texts. Regression restores what had been lost in civilisation, namely vitality or 'what we might call animal pleasures.'[50] Becoming an ape, in the case of Tarzan in the jungle as well as in the case of Hyde in the metropolitan jungle, certainly gives access to animal pleasures, while the gentlemanly ideal is exposed to an acute analysis.

Stevenson's narrative discretely subverts the status of those paragons of virtue, Mr Utterson and Dr Lanyon. The final discovery of Jekyll's identity with Hyde administers a shock to the scientist's friends, precisely for the reasons enumerated by Huxley in connection with the Darwinian mortification of Man: the encounter with one's own 'blurred copy and insulting caricature', and the intellectual upheaval of one's preconceived ideas. This is most clearly visible in Dr Lanyon's reaction. Having witnessed Hyde's transformation into Jekyll, Lanyon is so shocked that he cannot go on living: 'My life is shaken to its roots; sleep has left me; the deadliest terror sits by me at all hours of the day and night; I feel that my days are numbered, and that I must die; and yet I shall die incredulous' (JH 80).

There are several reasons why Dr Lanyon is so badly shaken (apart from it being a natural reaction if you just have observed a degenerate criminal morph into your oldest friend). In the first place, Lanyon is the most vociferous opponent of Jekyll's scientific 'heresies'; now Jekyll's challenge to orthodox beliefs in the stability of the body is completely vindicated. But in the second place, and more important, Lanyon is in many ways Jekyll's double: of the same age, indeed – as is Utterson – Jekyll's school companion, and equally a scientist of some reputation, a respectable citizen, a bachelor living on his own. Is not the confrontation with the 'blurred copy and insulting caricature' of his friend also an encounter

with his own repressed desires? In a society so strongly dependent on the restraint of man's 'animal nature', the mortification of the flesh, the denial of pleasure, it is not only the cosummate hypocrite Jekyll who is threatened by the return of the repressed and by the upsurge of the evolutionary past. In Stevenson's narrative, Mr Hyde becomes the general emblem of the Other hiding within the Victorian gentleman, a reminder of his descent from, and inevitable return to, the savage, the ape, and finally primordial slime, as Dr Jekyll states in his final confession:

> [Jekyll] thought of Hyde, for all his energy of life, as of something not only hellish but inorganic. This was the shocking thing; that the slime of the pit seemed to utter cries and voices; that the amorphous dust gesticulated and sinned; that what was dead, and had no shape, should usurp the offices of life. And this again, that that insurgent horror was knit to him closer than a wife, closer than an eye; lay caged in his flesh, where he heard it mutter and felt it struggle to be born; and at every hour of weakness, and in the confidences of slumber, prevailed against him, and deposed him out of life. (JH 95–6)

In the end, the insurgent savage within succeeds in overthrowing the civilised man's command over the disputed territory, the body. The result of this successful 'decolonisation' is the destruction of the civilisation built on repression; Jekyll's freedom is coterminous with his death.

The plasticity of living forms

It is a particular feature of Victorian Gothics that the question of physical transformation is clad in scientific terms. Matter is no longer solid. The reason is the underlying unity and equality of matter: the fact that 'the slime of the pit' is to be found within Jekyll's own body makes the transformation possible in the first place. This fundamental idea can be connected to Huxley's reflections on the 'Physical Basis of Life'. In a lecture of this title given in Edinburgh in 1868, Huxley extended Darwin's notion of a diachronic relation between organisms to postulate a synchronic unity, a material basis common to all plants and animals from the animalcule to the whale, from the fungus to the fig tree: 'that there is some one kind of matter which is common to all living beings, and that their endless diversities are bound together by a physical, as well as an ideal, unity'.[51] All organic life is composed of a common matter called protoplasm.

Man is included in this 'shocking' physiological description of life. According to Huxley, all activities of man can be subsumed under three categories: 'Either they are immediately directed towards the maintenance

and development of the body, or they effect transitory changes in the relative positions of parts of the body, or they tend towards the continuance of the species' (PBL 176). Provocatively, Huxley even includes the 'higher faculties' of man in his concept. The unity of matter works on all levels, so that he can declare that first, 'the acts of all living things are fundamentally one' (PBL 179), from the plants' processing of mineral compounds to scientists' public lectures, and that secondly, a formidable activity is going on unperceived within the body, for example the movement of leucocytes in a drop of blood: 'these colourless corpuscles will be seen to exhibit a marvellous activity, changing their forms with great rapidity, drawing in and thrusting out prolongations of their substance, and creeping about as if they were independent organisms' (PBL 179). This secret life in the depth of the organism is described in terms reminiscent of the entity of Hyde hidden inside Jekyll's body: where the leucocytes are 'marvellously active', 'rapidly changing their form', yet also stealthily 'creeping about', the submerged *alter ego* is equally active and insidious, muttering and struggling to be born.

Protoplasm is the endlessly malleable substance that can take the shape of a mollusc or worm, a fish or a mammal – a Jekyll or a Hyde: 'Protoplasm, simple or nucleated, is the formal basis of all life. It is the clay of the potter: which, bake it and paint it as he will, remains clay, separated by artifice and not by nature from the commonest brick or sun-dried clod. Thus it becomes clear that all living powers are cognate, and that all living forms are fundamentally of one living character' (PBL 181). Of course, Huxley is not implying anything in the way of Stevenson's fantastic tale, but his theory of protoplasm suggests not only the physiological unity of all organisms, but, with his metaphor of malleable clay, the plasticity of the body.

The ultimate fate and origin of the matter of life is, in a striking anticipation of Freud's death drive, always and only death, or inert matter: 'Under whatever disguise it takes refuge, whether fungus or oak, worm or man, the living protoplasm not only ultimately dies and is resolved into its mineral and lifeless constituents, but is always dying, and, strange as the paradox may sound, could not live unless it died' (PBL 183). The shocking thing about Hyde, Jekyll claims, is his almost 'inorganic' quality. The shocking aspect of Huxley's essay is the link he forges with inorganic matter that is processed by plants into organic protoplasm, the cosubstantial basis of vegetable, animal and human life. Not only are humans closely related to apes, they are also formed from the same matter as 'those simplest forms of life, which people an immense extent of the bottom of the sea' (PBL 180).

H.G. Wells's *The Island of Dr Moreau* (1896) pushes the idea of mutable bodies, and the consequences inherent in evolution theory in general, to the utmost limits. In a complex dialectical process, Wells's short novel interrogates not only the propositions, procedures and ethics of contemporary science, but also the very conditions of representation. *The Island of Dr Moreau* displays a strong meta-textual dimension, an interrogation of the reciprocal action of narrative, science and culture. This is achieved partly through the intertextual connections, in particular with *Frankenstein* and *Gulliver's Travels*, and partly through the ambivalent role of the first-person narrator, Edward Prendick.

Like Lemuel Gulliver's travel report, Prendick's manuscript, found after his death among his papers, is published by a nephew. But while Gulliver's nephew Richard Sympson asserts the almost proverbial veracity of his uncle and the absolute reliability and truth of his narrative, Charles Prendick calls his uncle Edward's tale into question. Certain external data support the latter's version of the events he experienced between 1 February 1887, when his ship, the *Lady Vain*, was lost by collision and he was supposed to have perished, and 5 January 1888, when he was picked up adrift in a small boat. But, as his nephew informs us, Edward Prendick's story about the fantastic hybrid creatures, half animal, half human, created by the scientist Dr Moreau 'is without confirmation in its most essential particular'.[52] A ship visiting the only island known to exist in the region where he was picked up finds it uninhabited, with the exception of 'certain curious white moths, some hogs and rabbits, and some rather peculiar rats' (IDM 3); no specimens, however, are secured. Moreover, when Prendick was found, 'he was supposed to be demented' (IDM 3).

Although Prendick considers his eye-witness report as 'the best of evidence' (IDM 5), he is thus set up from the beginning as a – potentially – unreliable narrator. His story may be the factual account of a scientifically trained observer; it may be the extended delusion of a madman. The second option is rather strengthened by his moral ambivalence. Prendick repeatedly fails to sustain an ethical position: self-interest and moral apathy determine his behaviour in the end. This foregrounding of the narrator's unreliability as a moral agent and as an observer results in a general loss of authority. The most crucial questions of science and of ethical responsibility are negotiated between three men of science, Prendick, Moreau and his sidekick Montgomery, the first of whom can be considered as paranoid, the second as a sadistic megalomaniac, and the third as a morally depraved alcoholic. Since no other responsible voice is admitted in the narrative, Prendick's negative conclusions about science, progress

and the human condition remain unchallenged. These reflections, coming from a tainted source, are not trustworthy, but no alternative is on offer. Prendick's condemnation of humanity remains the novel's last word.

In view of this insecure narrative ground, it is significant that the missing links are artificially created, 'forged' by Moreau in the double sense of the word. In consequence, the subversive function of the missing link is pushed even further than in other texts. If elsewhere its role as an interloper undermining binary signifying processes is contained in the ending, here by contrast it is precisely in the conclusion that the self is contaminated by the otherness of the missing link. Not only is the opposition between nature and culture collapsed; *both* are represented as a man-made hell from which there is no escape. The traditional institutions that are designed to give man either a sense of control or a sense of comfort, science and religion, are thoroughly discredited. Consequently, the novel should not be read only as a satire on science or on religion, but as an example of a post-Darwinian negative anthropology in which the fear that humans are really animals is, in the end, not alleviated but confirmed.

The ambiguity of the narrative situation frames the appearance of the strange creatures on Moreau's island, perceived as uncanny in the Freudian sense:

> I saw only their faces, yet there was something in their faces – I knew not what – that gave me a queer spasm of disgust. I looked steadily at them, and the impression did not pass, though I failed to see what had occasioned it. They seemed to me then to be brownmen, but their limbs were oddly swathed in some thin dirty white stuff down even to the fingers and feet. I have never seen men so wrapped up before, and women so only in the East. They wore turbans too, and thereunder peered out their elfin faces at me, faces with protruding lower jaws and bright eyes. They had lank black hair, almost like horse-hair, and seemed, as they sat, to exceed in stature any race of men I have seen. (IDM 25)

The unspecifiable sense of horror and disgust these creatures evoke in the observer is reminiscent of the reactions provoked by Mr Hyde. Not only is their deformity unnameable, like that of Stevenson's atavistic throwback, it is also racially marked in a similar way. The supposed 'natives' seem to be of vaguely Asian or South Pacific origin, connected through their appearance and clothing with the East. As Prendick discovers later, they are in fact Horse Men, degraded Houyhnhnms who

were remodelled by Moreau as anthropomorphic giants. These hybrid creatures certainly refer to Swift's rational horses; however, they – like the other hybrids in the novel – lack the superior intellectual capacity of their literary predecessors. The island is peopled by all kinds of chimeras forged in Moreau's laboratory: anthropoid beings made from apes, dogs, swine etc., but also monsters reminiscent of mediaeval travelogues: a Hyæna-Swine, a Mare-Rhinoceros, a Satyr made of ape and goat, and, most horrible of all, 'a limbless thing with a horrible face that writhed along the ground in a serpentine fashion' (IDM 75), which had had to be killed before Prendick's arrival.

Before he becomes aware of the origin of these creatures, the narrator is troubled by 'the indefinable queerness' of the 'natives', a queerness that is heightened not only by their 'odd motions', but also by their dubious linguistic status: 'I wondered what language they spoke. They had all seemed remarkably taciturn, and when they did speak, endowed with very uncanny voices' (IDM 31). Language, of course, is one of the traditional markers of humanity; another is the erect gait of human beings. The creatures heighten Prendick's doubts by their repeated reversion from bipedalism: 'Then suddenly upon the bank of the stream appeared something – at first I could not distinguish what it was. It bowed its head to the water and began to drink. Then I saw it was a man, going on all-fours like a beast!' (IDM 37) Gradually, a terrible suspicion begins to take shape in Prendick's mind. On observing a group of 'grotesque human figures' with skins of 'a dull pinkish drab colour' and 'fat heavy chinless faces, retreating foreheads, and a scant bristly hair upon their heads', he realises the nature of their deformity:

> Suddenly, as I watched their grotesque and unaccountable gestures, I perceived clearly for the first time what it was that had offended me, what had given me the two inconsistent and conflicting impressions of utter strangeness and yet of the strangest familiarity. The three creatures engaged in this mysterious rite were human in shape, and yet human beings with the strangest air about them of some unfamiliar animal. Each of these creatures, despite its human form, its rag of clothing, and the rough humanity of its bodily form, had woven into it, into its movements, into the expression of its countenance, into its whole presence, some now irresistible suggestion of a hog, a swinish taint, the unmistakable mark of the beast. (IDM 40)

Echoing medieval ideas about apes as humans fallen from grace, Prendick forms a theory of degradation to explain the curious hybridity

of the creatures: they must be human beings who had been interfered with, on whose bodies Moreau had grafted the mark of the beast. This theory is apparently confirmed as the yells of pain of Moreau's latest victim, a puma, suddenly change: 'It was no brute this time. It was a human being in torment!' (IDM 48) If the odd language of the creatures initially cast doubt on their status as human beings, now the changed quality of the voice heard from Moreaus's lab seems to proclaim the unequivocally human status of its owner. Prendick concludes that 'These creatures I had seen were the victims of some hideous experiment!' (IDM 50), but he is wrong about the way the experiment worked: the creatures are not animalised humans, but humanised animals.

In what precisely does the transgressive act consist that pushes *The Island of Dr Moreau* beyond the usual representations of anthroplogical anxiety? Is it Moreau's complete lack of justification except curiosity, the will to knowledge for its own sake? Is it the deliberate infliction of pain? Or is it the anthropocentric transgression, the wish to imitate God and create human beings? Prendick sees 'wickedness' (IDM 71) in Moreau's choice of the human form as his model. In answer to this charge, Moreau 'confessed that he had chosen that form by chance' (IDM 71): to create humans turned out to be pragmatically feasible and satisfactory to 'the artistic turn of mind', but to the scientific sensibility the particular sinfulness of the undertaking is not apparent: 'I might just as well have worked sheep into llamas, and llamas into sheep' (IDM 71). Indeed, the particular closeness between apes and humans points the way to the first successful experiment:

> Then I took a gorilla I had, and upon that, working with infinite care, and mastering difficulty after difficulty, I made my first man. All the week, night and day, I moulded him. With him it was chiefly the brain that needed moulding; much had to be added, much changed. I thought him a fair specimen of the negroid type when I had done him, and he lay, bandaged, bound, and motionless before me. [...] I spent many days educating the brute – altogether I had him for three or four months. I taught him the rudiments of English, gave him ideas of counting, even made the thing read the alphabet. But at that he was slow – though I've met with idiots slower. He began with a clean sheet, mentally; had no memories left in his mind of what he had been. (IDM 73–74)

Once again, the alleged closeness between the 'higher apes' and the 'lower races' is foregrounded. Moreau transforms the gorilla not into

a generic human being, but specifically into a 'negroid type'. The racial thinking that taints evolutionary genealogy is thus made explicit. The education process that complements the making of the Gorilla Man shows up the civilising mission as an alienating imposition that barely raises the new creature above the level of an 'idiot' – a travesty of education. The creation of 'my first man' reverberates with echoes of Victor Frankenstein's creation of a living being out of dead materials, but the dry, high-handed tone of the post-evolutionary scientist contrasts sharply with the romantic agony of his predecessor:

> How can I describe my emotions at this catastrophe, or how delineate the wretch whom with such infinite pains and care I had endeavoured to form? His limbs were in proportion, and I had selected his features as beautiful. Beautiful! – Great God! His yellow skin scarcely covered the work of muscles and arteries beneath; his hair was of a lustrous black, and flowing; his teeth of a pearly whiteness; but these luxuriances only formed a more horrid contrast with his watery eyes, that seemed almost of the same colour as the dun white sockets in which they were set, his shrivelled complexion and straight black lips.[53]

Frankenstein remains locked in an aesthetic register that interprets the fusion of contrasts as 'horrid'. The transgressive act of artificial creation is followed by the creator's regression into a childlike state, a retreat into illness that is coupled with his irresponsible abandonment of the creature. By contrast, Moreau perceives his experiment as a success; he views the new man with a taxonomic gaze, and takes precautions to secure and educate him. A crucial change between the two experiments concerns their attitude to nature: whereas Frankenstein's creation is a challenge to nature, is, in fact, deeply *un*natural, Moreau pursues his studies *in imitation* of nature, a nature that is no longer infused with divine care and goodness. Even if Moreau's intervention in the evolutionary process renders the Beast People in the end less, not more fit for the struggle for life, his attitude frees him from the shackles of ethical considerations: 'To this day I have never troubled about the ethics of the matter. The study of Nature makes a man at last as remorseless as Nature' (IDM 73).

Despite his superficial success in transforming animals into human beings, signalled by their ability to speak, Moreaus's experiments ultimately fail. The Beast People's speech precisely is *not* original, as would be demanded of the traditional Cartesian difference marker: it is not

proof of their ability to think for themselves. Collectively, they can only repeat the litany of human attributes, the 'Law' imposed on them by Moreau. Individually, they are on the brink of thought, but can never move beyond a certain limit. For example, the Monkey Man's incessant but empty chatter is at once the sign of man and of beast. As Moreau has to admit, the intellect of the animals is not infinitely manipulable: their intelligence is 'often oddly low, with unaccountable blank ends, unexpected gaps', there is 'something that I cannot touch, somewhere – I cannot determine where – in the seat of the emotions' (IDM 76).

The passions that are traditionally considered as the 'brutish' part of man – '[c]ravings, instincts, desires' (IDM 76) – also bind the Beast People to their animal nature. And so, Moreau's creations remain imperfect: although after the operation, they seem to him 'indisputable human beings', their animality soon becomes apparent to the observer. The creatures begin to revert. Indeed, it remains unclear whether this return to animality is an objective fact or a change in the perception of the beholder: 'It's afterwards as I observe them that the persuasion fades. First one animal trait, then another, creeps to the surface and stares out at me ...' (IDM 76).

The difference between men and animals finally eludes Moreau, and increasingly it begins to elude Prendick. After his discovery of Moreau's secret, he reads the Beast People's plight as a metaphor of the human condition: 'A strange persuasion came upon me that, save for the grossness of the line, the grotesqueness of the forms, I had here before me the whole balance of human life in miniature, the whole interplay of instinct, reason, and fate, in its simplest form' (IDM 93). The difference between humans and animals is progressively erased. While Prendick thinks that the island's inhabitants are people, he is haunted by the animality of their form; after his discovery that they are in truth animals, he begins to perceive their humanity: 'They may once have been animals. But I never before saw an animal trying to think' (IDM 67). Paradoxically, his recognition of the animals' humanity becomes strongest after the Beast People's reversion to their original state: 'It may seem a strange contradiction in me – I cannot explain the fact, – but now, seeing the creature there in a perfectly animal attitude, with the light gleaming in its eyes, and its imperfectly human face distorted with terror, I realized again the fact of its humanity' (IDM 91–2).

With the acknowledgement of the human in the animal, the opposite movement sets in: Prendick recognises the animal part inherent in human beings. This process begins on the island with Montgomery's descent into alcoholism and his 'going native', or rather 'going

animal': 'his evident sympathy with the Beast People [...] tainted him to me' (IDM 95). But gradually, Prendick's disgust at the animal aspect in man grows to include all mankind; the abjection of humanity increases with his approach to civilisation. Back in London, Prendick develops paranoia concerning the people around him: 'I could not persuade myself that the men and women I met were not also another, still passably human, Beast People, animals half-wrought into the outward image of human souls, and that they would presently begin to revert, to show first this bestial mark and then that' (IDM 128). The transformation into animals described here is not degeneration, a return to an earlier evolutionary stage. Civilised human beings *in the present* show the mark of the beast.

While Prendick initially perceived a beastly, uncanny otherness in the people he took for colonised natives, now he sees it in his fellow-Londoners. The missing link is no longer safely located in anachronistic space and panoptical time, in the 'out there' of the colonial fringe. In a final act of psychological reverse colonisation, the Other has now invaded the European self at the very centre of Empire. Not even the narrator himself is exempt from this invasion: his fear is only half-human, it is the fear of the 'half-tamed lion cub'. The animality he sees on other people's faces is ubiquitous: 'Then I look about my fellow-men. And I go in fear. I see faces keen and bright, others dull and dangerous, others unsteady, insincere; none that have the calm authority of a reasonable soul. I feel as though the animal was surging up through them; that presently the degradation of the Islanders will be played over again on a larger scale' (IDM 128).

Unlike the noble Houyhnhnms in Swift's novel, the missing links who revealed to him the degraded state of humanity are themselves degraded. Gulliver has at least the consolation that a place exists, albeit out of reach, where rationality has a home. Expelled from this utopia, he has to console himself with 'two young stone-horses, which I keep in a good stable [...]; I converse with them at least four hours every day'.[54] As long as rational conversation exists, even in such a limited form, the narrator can maintain his own rationality. Prendick, by contrast, has himself turned into a border figure, hovering not only between animality and humanity, but also between sanity and madness:

> I would go out into the streets to fight with my delusion, and prowling women would mew after me, furtive craving men glanced jealously at me, weary pale workers go coughing by me, with tired eyes and eager paces like wounded deer dripping blood, old people, bent

> and dull, pass murmuring to themselves, and all unheeding a ragged tail of gibing children. Then I would turn aside into some chapel, and even there, such was my disturbance, it seemed that the preacher gibbered Big Thinks even as the Ape Man had done; or into some library, and there the intent faces over the books seemed but patient creatures waiting for prey. Particularly nauseous were the blank expressionless faces of people in trains and omnibuses; they seemed no more my fellow-creatures than dead bodies would be, so that I did not dare travel unless I was assured of being alone. And even if it seemed that I, too, was not a reasonable creature, but only an animal tormented with some strange disorder in its brain, that sent it to wander alone, like a sheep stricken with the gid. (IDM 128–9)

In this final twist, the border between animal and human has been finally eroded, and the point of transition has been pushed from the animal to man. Prendick himself is now a missing link, a border figure in whom the bestial and the human are indistinguishably fused. For him, solace is not to be found in animated nature. He turns to astronomy to find peace of mind: 'There is, though I do not know how there is or why there is, a sense of infinite peace and protection in the glittering hosts of heaven. There it must be, I think, in the vast and eternal laws of matter, and not in the daily cares and sins and troubles of men, that whatever is more than animal within us must find its solace and its hope' (IDM 129). But this hope is treacherous, too. As we know from Wells's other great novel, *The War of the Worlds*, although rationality does exist in the outer space, it does not bring peace or hope.

The civilised ape

'Becoming human' as loss of plenitude

In the immediate aftermath of Darwin's evolution theory the human likeness of apes is perceived as threatening; around 1900 this relationship begins to change. In modernist fiction, the ape's achievement of a human status – reason, speech, culture – is no longer perceived as a success story, but as the loss of a plenitude accessible only in a state of nature. At the limit, modernist fiction – as in Kafka's animal stories – strives for a 'theriocentric' (animal-centred) perspective, an approximation to the animal's being, which demands an effacing of language, a placing of the narrative *sous rature*.[55] This negation of narrative is paradoxically linked by Kafka to the speaking position of the

artist: artistic expression coincides with silence, or rather, with a withholding of meaning in the very act of enunciation.[56]

Kafka's animal tales certainly represent the culmination of the European theriocentric tradition, but they are not unique. An interesting but little-known forerunner is Frank Challice Constable's novel *The Curse of Intellect* (1895), published under the somewhat overdetermined pseudonym Machiavelli Colin Clout. The first person narrator, also called Colin Clout, encounters one night, during a performance of *Don Giovanni* at Covent Garden, his old college friend Reuben Power accompanied by a strange creature. Like Mr Hyde and Dr Moreau's Beast People, Power's companion provokes spontaneous disgust; he is hissed and attacked by the audience for his transgressive fusion of the apparently irreconcilable, for his assumption of the cultural markers of humanity: 'The clothes and boots were covering the body of a monkey. The hair of the head and on the face was admirably cut and arranged, but the face was undoubtedly the face of a monkey'.[57] As is later explained, Reuben Power had tamed and educated the monkey for an experiment: to test whether intellect or emotion forms the basis of human happiness.

Power himself is a post-Darwinian atheist 'absorbed in a theory of utter degradation, the lost state of man' (CI 6), as his Cambridge tutor describes evolution theory. Power claims that 'all that separates man from other beasts is reason. By intellect he is higher than all other created beings. It must be right that intellect should be developed even at the expense of happiness' (CI 10). In order to prove his hypothesis, Power needs 'some independent source' (CI 12), a neutral, unbiased witness – a non-human being. The inherent paradox ensuring the ultimate failure of his experiment is, evidently, that the non-human witness must be able to communicate, i.e. must leave behind his state of nature and achieve at least a semblance of humanity – and consequently, abandon the neutral point of view.

The experiment as such is partly successful – the ape learns to speak, albeit only in 'a painfully grotesque parody of man's speech' (CI 26), and finally leads the life of a gentleman. Indeed, after the initial hostility provoked by his appearance at the opera, he becomes a darling of fashionable society. The ape's social success is only possible because society itself lacks a soul and has replaced human affections with mercenary transactions. The ultimate moral of the narrative is that love is the highest faculty in human beings, and that the overvaluation of intellect leads to abject misery. Through his rejection of love, Power has caught himself in a trap of his own devising: 'Looking at Power, I was struck again, as at the opera, with the inhuman coldness and repose of his face.

But now I saw, too, an equally inhuman expression of hopeless misery [...]. The Beast's expression was fathomless, but he strangely suggested to me – how, I know not – vigorous, unprejudiced intellect' (CI 47). By joining the intellectual capacity of man to his own superior physical strength, the animal has become a super-ape who dominates his former captor and mentor.[58] The power relation is reversed; the human master becomes his creature's slave and lives in daily fear of his life. In the end, Reuben Power is killed by the ape who subsequently commits suicide.

The social satire of Colin Clout's narrative frames the ape's first-person tale of his capture and education by Power. Like E.T.A. Hoffmann's educated ape Milo before him and Kafka's Rotpeter after him, he finds that a return to the state of innocence before language is impossible:

> I remember vaguely, and as a former life, the time before Reuben Power found and took me away. A life in the forest, of perfect health and virgin strength, with many of my kind; a life taking no thought for the morrow, a life above thought; free from the conscious restraint of any law, the daily sufficient food gained by daily sufficient labour; a life of perfect, of pure happiness – instinctive happiness from reasonable life and the unaffected intercourse of living creatures. But above all was the divine happiness – lost to me now, scarcely felt in my after-life of misery till the end was near – from conscious unity with, part in nature herself, under the Great unknown being who pervades all things animate and inanimate. (CI 95–6)

Freedom and happiness are associated with the absence of civilisation; they are based on the 'unity with, part in nature' available only to the animal. The upward move on the evolutionary ladder, from dumb beast to a conscious, quasi-human being, is finally experienced as degradation. The ape's description of the educational process itself remains rather vague; as in the case of Poe's orang-outang and Kafka's Rotpeter, the chief civilising instrument is the whip. Through fear, the ape is forced to lose his 'part in nature' and to develop a sense of individuality, i.e. of separation – the first step towards civilisation: 'I woke one morning with new life. I was conscious of individuality. I knew I could think, and felt power to will [sic]. All through my being rushed a feeling of inordinate pride. I was a monkey, and so – at that time – felt inferiority to man, whom I then recognised as a distinct, superior being' (CI 96). In becoming self-conscious, the ape crosses the border line separating the animal from the human. Henceforth, the Nietzschean ape strives for knowledge and power, aspiring to become like his master.

But like Frankenstein's creature – and in a strikingly similar scene – the speaking ape has to realise that he is an outcast from human society, unique and hence monstrous. This feeling of isolation results in rage directed, again as in *Frankenstein*, against his creator. To achieve and prove his superiority, the ape commits a series of murders, beginning with the elimination of a 'rival monkey' and culminating in the killing of his master. The murders are deliberate acts of revenge, i.e. motivated and rational, not imitative gestures gone wrong as in Poe's story. By committing these evil deeds, by imposing his will against law and morality, the ape not only strives to become equal with humans, but even to set himself above the multitude motivated by petty selfishness and greed – the animal as *Überaffe*.

Reason plays a complex role in Constable's narrative. On the one hand, the Cartesian distinctive mark of humanness is the basis for individuality and the factor that raises man and beast, Power and his ape, above the multitude. On the other hand, it not only fails to operate as a sign of difference, since the monkey is able to attain it. In addition, intellect, the human specific, is placed by the ape below instinct, the common property of all creatures. Reason is the ultimate cause for Power's downfall and abject misery. The ape comments:

> The boast of man, that by his reason he is the king of all beasts, is empty and false. His life is mean and ignoble by comparison with that of others, though conquest of the material may have given him physical command. [...] Even man's latest example of a great philosopher, unhealthy in body, querulous and repining in mind, is less enviable, less worthy of imitation, than that of a cow peacefully and contentedly chewing the cud. (CI 134)

The 'ascent' from apehood to humanity is described in *The Curse of Intellect* as a loss of plenitude and freedom only attainable in the realm of nature. To be human means to be marked by a split – between the emotions and the intellect, as the set-up of Power's experiment indicates, between the physical self and the reflected mirror image, as proposed by Lacan. The ape, as texts from Lacan's 'Mirror Stage' to Burroughs's *Tarzan* suggest, is by contrast at one with itself and with nature. This oneness, however, is bound up with the ape's lack of language. The resulting aporia for texts aiming at a theriocentric point of view consists in the untranslatability of the ape's 'thoughts', or rather its experience of self, into human language – the fundamental inaccessibility of the pre-linguistic realm to any kind of representation, including literature.

Most ape narratives choose an external focalisation, they do not represent the ape's point of view directly. In this sense, *The Curse of Intellect* forms an early exception: by inserting a first-person narrative told by the ape, it gives the Other a voice. The ape's first-person narrative provides an incipiently theriocentric counterpoint to the social satire of Colin Clout's narrative frame; but the aporia generated by the animal's fundamental lack of speech is acknowledged in the ape's avowal that he cannot remember his animal state. The ape speaks, but he speaks only as a human.

Kafka's human ape

Franz Kafka directs the focus entirely at the ape's story. His 'Report for an Academy' (1917) consists in the unmediated speech of a chimpanzee addressed to the members of a learned society. His audience remains voiceless. As Gerhard Neumann has argued, Kafka's narrative constitutes a space in which the topos of the ape changes track: the ape no longer reflects mankind, but circles solipsistically around himself.[59] His 'report' deliberately withholds any metaphysical investment, any 'message' about human existence: 'I am merely making a report; even to you, gentlemen of the Academy, I have merely made a report.'[60]

As Deleuze and Guattari have remarked, Kafka's tales form 'seulement des protocoles d'expérience',[61] they are the transcripts of both experience and experiment. In its entirety, the ape's monologue amounts to a negation of the human audience; the members of the academy remain mute and invisible. The ape describes his transition from animality to humanity; his refusal to see this trajectory as an 'ascent' links it to Deleuze and Guattari's critique of the human. If their concept of 'becoming' – *devenir-animal* – can be described as a stepping out of the representational relation based on resemblance and identification, then the opposite, the ape's transformation into a human being, can be defined as an acceptance of this relation, including the split between self and mirror-image. The liberating dissolution of identity of the becoming-animal is reversed by the speaking ape, utter freedom is exchanged for the restricted 'way out' (*Ausweg*) offered by the turn to humanity.

As in the monkey's account in *The Curse of Intellect*, the first step of 'becoming human' consists in wrenching oneself away from the plenitude of nature which can be experienced only by the free animal, and which then remains closed forever. Rotpeter's 'achievement' (*Leistung*) is built on the conscious renouncing of free will or 'wilfulness' (*Eigensinn*), the acceptance of the 'yoke' and the necessary sacrifice of memory: 'This achievement would have been impossible if I had willfully clung to my

origins, to the memories of my youth. In fact, avoidance of all willfulness was the supreme commandment I had imposed on myself; I, a free ape, accepted that yoke. Thereby, however, my memories were in turn increasingly lost to me' (RA 81).[62] To become human means to renounce freedom. Through this conscious act, the ape cuts himself off from his roots, from his own nature. Past evolutionary stages are irrecoverably lost: 'your own apehood, gentlemen, to the extent that there is anything like that in your past, cannot be more remote from you than mine is from me' (RA 81).[63] This 'progress' is not desirable in itself, it is a compromise, the only 'way out' in the animal's desolate situation after his capture: 'I had no way out, but had to create one for myself, because without it I couldn't live. Always up against the side of that crate – I would definitely have dropped dead. But, for Hagenbeck, apes belong at the side of the crate – so I stopped being an ape' (RA 84).[64]

This decision is followed by an arduous process of becoming human which has nothing lofty or spiritual about it. In fact, becoming human means accepting a series of indignities and learning absurd, degrading kinds of behaviour, like spitting or drinking alcohol. To conquer his innate disgust of liquor is one of Rotpeter's greatest achievements; his first draining of a bottle marks his approach to human status more decisively than the first word he utters. It is no longer speech or rationality that constitutes the particular mark of the human, but rather human vices like sadism, drinking and smoking. Pain is once more a staple of the ape's education, but in Rotpeter's case, it is hardly necessary because the struggle towards humanity is desired by himself. The teacher who, for pedagogical reasons, sets fire to Peter's fur where he cannot reach it is described as full of understanding, the hand that both lights and extinguishes the fire is called 'good' – teacher and pupil fight together against the ape's nature. The acceptance of pain belongs to the education process like the acceptance of the yoke; in a way, Peter's story is a *bildungsroman* in reverse – not an expansion but a withering of the person. Even Peter's intellectual achievements are qualified – the awakening of the brain gives happiness, but the sufferings he has to undergo seem disproportionate to the final result:

> That progress! That penetration of rays of knowledge from all sides into my awakening brain! I won't deny it: it made me happy. But I also admit: I didn't overestimate it, not even then, let alone today. Through an effort that hasn't found its match on earth to the present day, I have attained the educational level of an average European. Perhaps that wouldn't be anything by itself, but it is really something

> when you consider that it helped me out of my cage and gave me this particular way out, this human way out. There's an excellent German expression: *sich in die Büsche schlagen*, to steal away secretly. That's what I did, I stole away secretly. I had no other way, always presupposing that I couldn't choose freedom. (RA 88)[65]

The rhetoric of the glory of the human intellect to be found in Thomas Henry Huxley's writings, and satirised in Reuben Power's assumption of authority, is conspicuously absent here. Rationality is the mark that separates man from beast, but so what? Rotpeter makes it clear that he gave up a greater good, freedom, for the only way of escape that was offered to him. In his cage, he does not aspire to a higher state of being, but just wishes to 'slip away'. He chooses to become a varieté artist, again as a way out: the alternative would be the existence of a caged zoo animal.

Gilles Deleuze and Felix Guattari attempt to read the 'Report' as an example of their notion of *devenir-animal*. 'Becoming-animal' is not an evolution by descent and filiation, but an alliance of heterogeneous elements. Deleuze and Guattari replace Darwin's question of questions about man's descent by a set of queries directed at possible modes of expansion, propagation, contagion and population. Evolutionary concerns about 'the origin of species', 'the descent of man', 'sexual selection' and 'man's place in nature' are rejected for the sake of a deliberately anti-anthropocentric interest in heterogeneous transmission. Within this theoretical framework, the notion of anthropological anxiety becomes meaningless – not because, as in many modernist texts, regression can be embraced as regeneration, but because 'becoming' does not operate with directional terms such as progress, regression or filiation: 'Becoming is certainly not imitating, or identifying with something; neither is it regressing-progressing; neither is it corresponding, establishing corresponding relations; neither is it producing, producing a filiation or producing through filiation.'[66] They adopt Kafka's term *Ausweg* to describe the trajectory of becoming-animal through the heterogeneous processes of contagion and dissolution.

However, Peter's transformation is not rhizomatic, but directional and progressive; his aim is not the process of becoming, but the – despised but comparatively unfettered – human status. Again in opposition to becoming-animal, his act is based on the separation from the 'multitude' and on the final isolation of the individual. While the Deleuzian 'animal', the 'outsider', relates to the multitude, the human being instead becomes part of a couple. Peter's existence as a human is propped up

by the relationship with his half-tamed chimp girlfriend, a mixture between pet and sex-slave: 'When I come home late at night from banquets, learned societies or friendly gatherings, a little half-trained female chimpanzee is waiting for me and I have a good time with her, ape fashion; in the daytime I don't want to see her, because her eyes have that deranged look which bewildered trained animals have; I'm the only one who recognizes it, and I can't stand it' (RA 88).[67]

This arrangement echoes the ending of *The Island of Dr Moreau*. Kafka's story similarly discloses the madness and the animality hardly kept at bay by the human subject. Those who have been confronted by the animal's gaze, like Prendick, or who have been animals themselves, like Peter, recognise the animal madness in the eye of those surrounding them. It is 'insupportable' to those who can see it because it is not really outside. At the same time, it is an arrangement that works for Peter. He has found a place in the human structure of life, based on splitting and doubling: the internal division of the subject (the double life) and the binary structure of sexuality (the couple). In all this, Peter's trajectory is diametrically opposed to Deleuze and Guattari's concept of becoming-animal: the 'Report' describes the normalisation of the outsider, not the move outside of the normal. The radical aspect of Kafka's 'Bericht für eine Akademie' does not consist in celebrating the dissolution of the subject, but in describing the price of normalisation. The ape quietly accepts that there is no alternative to his *Menschenausweg* which consists in overcoming the *Affennatur*, no alternative except the madness of the half-tamed chimp or the living death in a cage. For Rotpeter, becoming human means renouncing the illusion of freedom.

The modern human-ape romance

In Kafka's 'Report for an Academy' ape narratives reach their aesthetic culmination. Rotpeter's cool monologue provides in many ways a counterpoint to the excessive phantasmagorias in the Gothic imperialist mode that dominate Victorian ape narratives. In its economy of plot, the strict adherence to the ape's point of view and the reduction of the evolutionary success story to the resigned notion of *Ausweg*, Kafka's narrative marks a turning point in the history of simian anxiety: both on the formal level and on the level of content, the ape's tale has become *modern*. Written in 1917, in the midst of a worst-case scenario concerning the development of humankind, Kafka can only observe that the greatest possible disaster is not to regress into an ape, but to be human. During the First World War, the foundations for anthropological anxiety were changed forever. One could say that in the twentieth century, the

anxiety of simianation is superseded by the anxiety of humanisation: the conjunction of atavistic fear and hatred with the technological potential of modernity.

Concomitantly, complex cultural shifts take place that modify the views on Europe's imperial adventure. Around 1900, on the one hand, the assumed superiority of Western culture is undermined by political events such as the Anglo-Boer War, the egregious moral failure of the European powers in the Congo and the beginnings of anti-colonial resistance in India and elsewhere. On the other hand, the aesthetic movement of modernism in art and literature displays a new sensibility towards cultures hitherto perceived as barbarian and savage. Modernist aesthetics are transformed through the encounter with so-called primitive art, most famously in Picasso's complete reconceptualisation of his *Demoiselles d'Avignon* following his 'discovery' of African masks in 1905–07. Although modern artists' reaction to African and Oceanic art (or rather, cult objects) can be criticised with some justification as Eurocentric appropriation or cultural colonisation,[68] nevertheless it can be maintained that the attitude to non-European cultures begins to undergo a change for the positive in modernist art and literature. The representation of colonial desire, always already ambivalent, shifts from repression to yearning.

These changes result in lifting some of the burden weighing on the anxiety of simianation. The human-ape interchangeability is still a topos in the English novel, but the mode changes from panic-stricken to satirical. Under these auspices, even the greatest taboo now becomes representable: sexual relations between humans and primates. In *Tarzan of the Apes* it was suggested that female apes made the better mothers. In John Collier's *His Monkey Wife* (1930), the chimp is the better wife. Collier's novel is practically unique among ape narratives in that the main protagonist and focaliser is both an ape and a female.

The lowly heroine, Emily – 'beneath that rather Charlotte Brontë exterior, there was actually a Charlotte Brontë interior, full of meek pride, hopeless hope, and timid determination' (MW 10) – is a tame African chimpanzee who falls in love with her master, the missionary teacher Alfred Fatigay. Unfortunately, Fatigay is engaged to be married to the devious, selfish Amy. After his stint in the jungle, he takes Emily with him to London and gives her as a present to his fiancée who, perceiving something of her new 'maid's' feelings, torments her pitilessly. As a particular cruelty, she wants the amorous chimp to officiate as bridesmaid. On the morning of the wedding, however, Emily forces Amy to exchange roles with her, for greater emphasis waving Poe's 'Murders in

the Rue Morgue'. Since both are brunette and petite, nobody notices the substitution; the unsuspecting Mr Faraday is married to the chimp – legally, in the eyes of the church that has come to terms with the no longer upsetting Darwinian claims about human-ape kinship:

> "Hi, sir! Hi, sir! You've married me to a chimp!"[...]
>
> "Well, sir, what of that? The Church, you should be aware, is inspired from on High, and is therefore always abreast with the latest discoveries of science. Marriage between cousins, though I never encourage it myself, is perfectly legal. You must excuse me, sir, but I am a busy man. Good day!" (MW 160)

Before the novel reaches this farcical culmination, the focus lies, besides the romance plot, on the simian *bildungsroman*. As we saw in *The Curse of Intellect* and 'Report for an Academy', civilised apes attain self-consciousness only with their entry into the Symbolic order, i.e. when they acquire language. In consequence, they loose any memory of their state of nature, of the freedom of apehood. Emily, by contrast, is fully self-conscious and rational even before she has access to symbolisation; conversely, she does not forget her simian past. There is no decisive moment that would constitute a break between the state of nature and the human stage, just a series of approximations.

Emily learns to read by unobtrusively participating in the elementary reading lessons Mr Fatigay gives to African schoolchildren. Next, she constructs her view of the human world through the secret study of the books the teacher brought with him. Emily's self-education culminates in the Reading Room of the British Museum – the first book she orders is *On the Origin of Species* (MW 91). In fact, Emily is on a quest to find out about the difference – and the compatibility – between human and ape. As even Darwin's book fails to yield a satisfactory answer, she takes the next logical step and visits the traditional contact zone between humans and animals: the zoo. Emily experiments with the free and the captive position: as a visitor, she looks at the caged animals; then she slips into an empty cage, takes off her clothes and pretends to be a real chimp. The result of these experiments is that, indeed, humans and animals are indistinguishable. A couple of visitors, happening to be friends of Amy's, confirm that the difference depends solely on external insignia – the presence or absence of clothes, the position inside or outside the cage: 'if you dressed this one up in Amy's clothes, I'm sure I should find it hard to distinguish between them, except that the ape has the sweeter expression of the two' (MW 108).

Having recognised that (a) she would make a better wife for Mr Fatigay, and (b) that an exchange of brides is easily practicable, Emily proceeds to her stratagem on the wedding day. On realising his error the bridegroom is at first so shocked that he completely goes to pieces. While they are separated, Emily makes a stupendous career as an exotic dancer. In a neat reversal of the romance plot *à la Tarzan*, she saves her destitute and despairing lover – 'he fell in a swoon at her feet [...] she had the pitiful unconscious form gently lifted into the luxuriously cushioned limousine, where following, she took his ragged, verminous head upon her bosom' (MW 178) – and, in the role of sublime mother, nurses him back to health. Finally, Mr Fatigay acknowledges that, in these modern times, human wives are cold and selfish, while a bride chosen among man's lower cousins has the capacity for love, loyalty, disinterestedness and forgiveness otherwise found only in nineteenth-century fictional heroines, *and* the earning power to make a convalescent husband really comfortable.

From being the ultimate horror scenario, the mating between humans and apes has become the salvation of the distressed modern male. Collier's novel plays with the generic conventions of the ape narrative established in the nineteenth century, and turns most of them on their head: Africa as the heart of darkness, the pernicious lure of the exotic woman, the danger of simianation. The transposition of these dark fears into the comic mode hinges on the gender reversal played out in the novel. Instead of the violent, dangerous, destructive male ape we are presented with the tender, loving female chimp. Incidentally, the traditional gender hierarchy, also under attack in modernity, is finally, despite the emancipatory plot elements, restored by joining together a man and his monkey wife.

A theriocentric turn?

To sum up, in the texts discussed in this chapter, two versions of the anxiety of simianation are represented: an ape (or ape-like figure) moves upward to a civilised stage, conversely, a human figure regresses towards apehood. Both trajectories are fraught with fear, loss and the feeling of alienation. Why the regression into bestiality should entail distress is pretty much evident, but the opposite movement, the ascent to humanity, is equally disturbing, partly because it challenges human superiority and exteriority to the animal realm, but partly because it reveals, precisely, humanity as an exile from nature. In many literary texts, not only in the period under consideration here,[69] apes are represented as figures of plenitude, as beings that are at one with themselves and nature, while humans are split subjects, forever divorced from the natural

world. The evolutionary rise to the human stage therefore signifies the loss of this oneness or, in the words of Kafka's ape, of *Affenfreiheit*, the unlimited freedom accessible only to the dumb animal.

In the human–simian relationship, apes do not function as the Lacanian mirror, affirming human wholeness. Rather, the figure of the ape is ambiguous: the animal is looking back and simultaneously withholding its gaze, refusing to give an answer to man's question about his identity. This interplay between kinship and strangeness, similarity and difference, ends in violence. Men capture apes, display them in cages and torture them; apes take their revenge by bringing violence into the inner circle of human society. There are only very few exceptions in which something like an enduring bond between the human and the ape is achieved: the relation between Tarzan and his foster-mother Kala, between Mr Fatigay and his chimp bride Emily. Apparently, the female gender of an ape recuperates, rather paradoxically, the incommensurability of the ape. The 'caring' qualities of women are projected on female apes who thus represent the possibility of reconcilitation within the Family of Primates. These atypical examples form a nexus between the old myth of women abducted by apes and the recent image of primatology as a 'female' science, foregrounding the close bond prominent field workers like Jane Goodall and Dian Fossey form with their objects of observation.[70]

Around 1900, a change occurs in the literary representation of apes. The feeling of horror and abjection they evoke in nineteenth-century texts is transferred from the simian to the human figure. From Wells to Kafka, it is humanity itself that causes anthropological anxiety. Is it then possible to confirm Margot Norris's thesis that modernist art and writing is distinguished by a 'biocentric' (or 'theriocentric') turn? Modernist aesthetics are certainly motivated, at least in part, by a search for the Other, by an attempt to give expression to preconscious, prelinguistic states which also include the prehuman. Modernist artists and writers use animals as figures of identification and self-expression, as can be claimed for Max Ernst's bird figure Loplop and for Kafka's artist-animals. But are these figurations really 'about' animals? Is it not rather the case that the animals are vehicles for the construction of a different concept of the artist, built not on the control of the Other but on its integration, that is also expressed in different techniques, like free association, stream of consciousness, the move towards abstraction? Norris claims that 'biocentric' writers posit the animal, not as a creature of lack, but as a plenum:

> The result is a difference in natural and cultural ontology: the animal's desire is direct and appropriative while the human's is mediated and

> directed toward the recognition of the 'other'; the animal's natural power is sufficient for its kind while the human's biological power is inadequate to capture recognition and achieve prestige and must be supplemented by signifiers and symbols; the animal is autotelic and lives for itself in the fullness of its being while the cultural man lives in imitation of the desire of the 'other', driven by its *manque-à-être*; the animal surrenders to biological fate and evolutionary destiny while the human disregards the physicality of what is and reads his fate in the gaze of the 'other'.[71]

This statement agrees up to a point with my own analysis of ape narratives. But it has to be qualified in several respects. First, the tradition of attributing plenitude to animals and a fundamental 'lack' or 'split' to humans predates modernism. Secondly, the modernist shift in sensibility concerning the human–animal relation concerns as much the darkened view of humanity as the interest in a more genuine look at animals, manifested not only in literature but in new scientific approaches (e.g. the interest in apes' psychology that motivated Köhler's experiments). In contrast to Norris, I would maintain that modernist authors do not use animals as narrators and protagonists to reappropriate 'their animality amid an anthropocentric universe',[72] nor do they write *as* animals. Rather, they use the animal perspective to comment from a fictional 'outside' on the human condition – as they always did, beginning with Montaigne's musings on his cat's point of view in the 'Apology for Raymond Sebond'.

Finally, modernity as a historical period is much too heterogenous to be covered by a catch-all phrase such as Norris's 'biocentric turn'. Many writers continue to use animal imagery in fairly traditional ways. Both John Collier – despite his innovative use of a female simian protagonist – and Aldous Huxley in his satire on the modern American lifestyle, *After Many a Summer* (1939), write in a tradition that uses apes as mirrors of the human, in the one case to show a positive alternative image, in the other to depict the inherent bestiality of contemporary humanity. But even Kafka, the most likely candidate for radical, 'anti-anthropocentric' approaches like Norris's or Deleuze and Guattari's, does not liberate an 'ape within', nor does he write 'as an ape', but uses Red Peter as a persona to produce a tightly controlled, formally sophisticated text about the modern artist's predicament. Even in modernity, apes do not speak but are spoken for by their authors.

4
Missing Links and Lost Worlds: The Anxiety of Assimilation

> The missing link is the token of the solemn fact of our origin from inorganic matter. I did but catch one blessed glimpse of him. He had certainly a silver band about his neck. He was about three feet high. He was rolling in a lump of carrion. It is through him that we are related to the stars – the holy, the glorious stars, about which we know so little.
>
> William H. Mallock, *The New Paul and Virginia* (1878)[1]

> At my feet lay the finger that I had cut off. It was a human finger, only very thick, short, and covered with hair, having the nail worn down, too, doubtless in climbing trees and grubbing for roots. Even then with a shock I realised that I had stumbled on the Missing Link, or something that resembled it very strongly. Here in this unknown spot still survived a people such as were our forefathers hundreds of thousands or millions of years ago.
>
> Henry Rider Haggard, *Heu-Heu* (1924)[2]

Cannibalism as pharmakon

The fear of being eaten

The anxiety of simianation is the loss of vertical differentiation, the collapse of difference on the historical, genealogical axis. This is matched

by the anxiety of assimilation as synchronic de-differentiation, the fusion with other groups in a hierarchically structured space. The anxiety of simianation is often played out as a journey through time projected onto an individual body: the resurgence of primeval matter in contemporary man. The anxiety of assimilation, by contrast, is represented as a topographical movement, a journey through space, from the imperial metropolis to the fringes of empire which, however, may appear as the secret centre: the heart of darkness. In both versions of anthropological anxiety, the efforts to fix an external boundary are bound to revert to the rift within the self.

Although European, and in particular British, superiority over the diverse indigenous populations – perceived as lagging behind Europeans both in evolutionary and cultural terms – is taken as a given, imperial fiction cannot escape the realisation that cultural contact does not go in one direction only, as the gift of civilisation brought to the savages. The empire strikes back by changing the coloniser's manners, habits, diets, and finally, their dreams and desires. Cross-cultural contact is, as Mary Louise Pratt, Robert J.C. Young and others have shown, fraught with ambivalence from the very beginning. On the one hand, the mixing and fusion resulting from the colonial encounter represent the greatest possible threat to the coloniser's identity. Cannibalism and miscegenation epitomise the ultimate horror of cultural contact: the Other invading, assimilating and swallowing, literally, the body of the European traveller. On the other hand, the *anxiety* of assimilation goes hand in hand with the *desire* for dissolution, diffusion, amalgamation. But from the point of view of the colonised, the gift of civilisation is also poisoned: it is spelled out as dispossession and extermination. The guilt that results from what is perceived as the perversion of the civilising mission in turn overwhelms the Western traveller, threatening his sense of separation from the horrors he observes.

Of the three topographies in which anthropological anxiety in general is acted out – the imperial metropolis, the Western male body and the colonial arena – the latter is the privileged space for negotiating the anxiety of assimilation in particular. In the remote colony or the uncharted, yet-to-be-discovered territory, the European adventurer-explorer is faced with the threat, and the temptation, of assimilation – with loosing his identity and merging into the undifferentiated space of the Other. According to Susan Bernstein, the anxiety of assimilation is predicated both on political processes (e.g. the extension of suffrage, growing social mobility and the debates about married women's property) and on 'technologies of assimilation' like the telegraph and the railway: 'Such

assimilative technologies feed Victorian visions of a conglomerate social body, the notion of the public sphere as a mass of teeming humanity where many are incorporated into one capacious entity.'[3]

The political process of assimilation is precarious: gestures of inclusion can constitute a powerful body politic, the British Empire, as the dominant force of civilisation – but the integration and uncontrolled growth of the wrong elements can equally result in the sick social body denounced by the theorists of degeneration from Galton to Nordau. Bernstein underlines the ambiguity of assimilation as successful integration on the one hand and loss of difference on the other hand: 'assimilation underscores uncertainty, the multi-direction potential of subsumption in the realms of nature and culture that Victorians read equivocally as progression or degeneration'.[4] If the inclusion of workers and women in the body politic constitutes a problem for national identity, then the incorporation of non-European peoples and cultures into the British Empire is even more problematic.

In the following, I look at the ambivalence of assimilation as represented in imperial fiction: the desire to control the Other, to keep it at a distance through the imposition of colonial order, and conversely the desire for incorporation and fusion – to cross the boundary, to become one body, to merge with the Other. Three distinct enactments of the encounter between self and Other can be made out that function as *pharmakon* in the sense described by Jacques Derrida, as both poison and remedy, simultaneously instituting and disrupting the separation between self and Other: (1) cannibalism – the act of incorporation (and of being incorporated) in its most literal sense, (2) regression – embracing the 'savage within' as an act of joyous self-abandonment or as an act of despair, (3) miscegenation – fusion on the sexual level. The scene for these ambivalent processes of interaction is the uncanny encounter with the missing link, resulting either in the desire of assimilation with or, more often, the extermination of this Other which is also a mirror image of the self. In imperial fiction, these configurations are set up as alternating scenarios of boundary crossing and boundary consolidation.

The *pharmakon*, the Greek word for drug (both beneficial and harmful), is used in Derrida's reading of Plato as a metaphor for the ambivalent effect of writing, both erasing and preserving the spoken word and living memory. Derrida uses the term metaphorically to explicate his interests in the workings of *écriture* within Western philosophy. I want to borrow this metaphor to designate the configurations that follow the structure of writing in Derrida's sense, bearing their own *différance*

within, which cannot be dissolved dialectically into an inside and an outside: 'Apprehended as a blend and an impurity, the *pharmakon* also acts like an aggressor or a housebreaker, threatening some internal purity and security [...]. The purity of the inside can then only be restored if the *charges are brought home* against exteriority as a supplement, inessential yet harmful to the essence, a surplus that *ought* never to have come to be added to the untouched plenitude of the inside.'[5]

The edible and, even more strongly, the potable nature of the drug makes it a particularly apt image for obsessive acts of consumption and the correlated fear of consuming something impure, or of being consumed. Eating (with) the Other resonates with the fear of pollution, of unclean substances invading the body: 'the *pharmakon* always penetrates like a liquid; it is absorbed, drunk, introduced into the inside, which it first marks with the hardness of the type, soon to invade it and inundate it with its medicine, its brew, its drink, its potion, its poison'.[6] Imperial fiction abounds with images of cannibalism, blood drinking and the consumption of forbidden or disgusting food. The struggle for purity and the maintenance of boundaries is expressed in the refusal to accept these abject substances.

The *pharmakon* is closely connected to a figure that bears resemblance to the missing link: the *pharmakos*, the scapegoat, coming from within but ritually and regularly expelled from the community to restore the health and purity of the social body. Like the missing link, the *pharmakos* is a liminal figure, used to constitute and mark the border, but also pointing to the artificiality and precariousness of the border.[7] Imperial fiction negotiates the question of boundaries but, since writing itself is structured like a *pharmakon*, the business of separating the self and the Other in fictional models of first encounter scenes is bound to fail. Even when the political agenda of these texts is fairly clear, the excess necessary to expel the *pharmakos* – the rhetoric of abjection, the punitive expedition, the massacre – in its very exaggeration unveils the unstable ground on which the desire for purity stands. The Other is always already within; in the figurations of the cannibal, the missing link, the lost race it is externalised only to show the Western traveller the distorted image of his own self.

Recent studies have shown that cannibalism is something like a 'metafantasy' of the European encounter with other peoples.[8] Whatever their actual practices may have been, the selling point of travel reports about American and, later, African and Pacific natives has always been their supposed anthropophagy. The importance of cannibalism within colonial discourse derives precisely from its status as a *discursive* fact – *we*

know that *they* are man-eaters – that is almost completely divorced from the 'real' behaviour of exotic peoples.[9] Cannibalism is a mechanism of exclusion and abjection – the thought of eating human flesh provokes physical disgust – but its effect is ambivalent. It does not so much create straightforward 'Others' but uncanny 'self/Other' figures: 'Human beings who eat other human beings have always been placed on the very borders of humanity. They are not regarded as *in*human because if they were animals their behaviour would be natural and could not cause the outrage and fear that "cannibalism" has always provoked.'[10] In a metaphorical sense, the cannibal is thus akin to the missing link, both separating and connecting the European self with a horrible, abject otherness.

According to Peter Hulme, cannibalism is an important factor in the constitution of European identity, linked to the emerging body politic and body cultural of 'Europe' from the late Middle Ages onwards. The internal purification effected, for example, by the pogroms against Jews accused of ritual anthropophagy (the drinking of Christian blood) prepared Europe for the subsequent colonial expansion. But while the fear of anthropophagy was soon projected onto Europe's external boundaries, it also betrayed unease about the consumption of human flesh at its very centre, in Christian liturgy:

> The partaking to the host was transformed [by the fourth Lateran Council in 1215] from just one rite amongst several into the pre-eminent act of communion whereby Christians could be distinguished from pagans. From the middle of the thirteenth century to the end of the fifteenth, Jewish communities were massacred all over Europe and the massacres frequently followed charges of anthropophagy. The *pattern* is important: boundaries of community are often created by accusing those outside the boundary of the very practice on which the integrity of that community is founded. This is at one and the same time both a psychic process – involving repression and projection – and an ideological process – whereby the success of the projection confirms the need for the community to defend itself against the projected threat, thereby closing the circle and perpetuating it.[11]

The accusation of anthropophagy thus preceded the great discovery voyages and the emergence of colonial discourse, but it offered itself as a tested means as soon as a mechanism of differentiation – distinguishing savages from Europeans and justifying their subjection – was required.

Cannibalism thus constitutes a prefabricated part of colonial discourse and can be defined, not as a social practice, but as 'a term meaning, say, "the image of ferocious consumption of human flesh frequently used to mark the boundary between one community and its others", a term that has gained its entire meaning from within the discourse of European colonialism.'[12] The constructed character of this designation, and the relativity of the ensuing opposition between 'barbarous' and 'civilised' peoples, was already remarked on by Montaigne in his 'Des cannibales'.

Cannibalism is a projection of the European imagination. As both Arens and Hulme assert, the cannibal scene is always approached *a posteriori*: the cooking pot and the scattered bones tell us what (supposedly) happened – but the act itself is never directly witnessed. An example of such a scene, visited after the event, is to be found in *Tarzan of the Apes*. Tarzan, having killed his 'first man' Kulonga and *refrained* from eating him, scours the African village where Mbonga, his victim's father, is chief: 'In the center of the room was a cooking pot, and at the far end a litter of dry grasses covered by woven mats which evidently served the owners as beds and bedding. Several human skulls lay upon the floor' (TA 67). As Hulme comments, 'the primal scene of "cannibalism" as "witnessed" by Westerners is of its aftermath rather than its performance'.[13] The pot and bones stand metonymically for the feast. However, *Tarzan of the Apes* is not content with presenting the traditional circumstantial evidence. Cannibalism could in fact be described as the novel's obsession and as the most important mechanism for differentiating 'true humans' from lesser 'sub-humans', and the latter from animals.

Before he enters the hut with the cooking pot, Tarzan is confronted with more direct evidence, or this is what the narrative suggests. From his vantage-point in a tree, Tarzan watches the villagers' treatment of a prisoner; torture is automatically equated with butchery in preparation of the cannibal act. The event is explicitly set up as educational. Tarzan, who is at the time grappling with the definition of the human and the question of his own identity, observes and compares, in order to learn about 'the ways of human beings': 'He wondered if they would spring upon their meat while it was still alive. The Apes did not do such things as that' (TA 72). The Africans are 'not apes'; but are they representative of the 'human way'? Tarzan looks on with great interest as the prisoner is slowly tortured to death. He does not think of intervening while the man lives, but he aborts the cannibal feast *just before* it is consummated by throwing one of the skulls from a previous feast in their midst. Despite the vivid description suggesting that an act of cannibalism is

actually being witnessed, in truth it is erased – Tarzan, and we, see only the before and after, the cooking preparations and the cleanly picked skull.

Several conclusions can be drawn from this scene about the representation of cannibalism: (1) Even if it is a central topic, cannibalism is 'unspeakable', it cannot be represented. (2) Ethnographic passivity is justified: it is all right to watch the painful execution of a prisoner so long as it is in the interest of knowledge – to learn more about 'the ways of human beings'. (3) Cannibalism is something that humans do; it is not 'the way of animals'. (4) Cannibalism is something that savages do to other savages. These rules are varied in a later repetition of the scene, but with a difference: the victim is white.

After Jane's abduction by the ape Terkoz, a search party led by D'Arnot stumbles on the warriors of Mbonga's village; the French officer is captured and subjected to the usual ritual:

> Half fainting from pain and exhaustion, D'Arnot watched from beneath half closed lids what seemed but the vagary of delirium, or some horrid night-mare from which he must soon awake.
>
> The bestial faces, daubed with color – the huge mouths and flabby hanging lips – the yellow teeth, sharp filed – the rolling, demon eyes – the shining naked bodies – the cruel spears. Surely no such creatures really existed upon earth – he must indeed be dreaming. […]
>
> Another spear and then another touched him. He closed his eyes and held his teeth firm set – he would not cry out.
>
> He was a soldier of France, and he would teach these beasts how an officer and a gentleman died. (TA 155–6)

D'Arnot's torture is an exact repetition of the first 'cannibal scene', but this time it is not watched from an external vantage point – Tarzan on a tree – but presented from the victim's perspective. His status as a human subject is thus confirmed. Conversely, the African villagers are even more dehumanised. While the Frenchman has a double claim to humanity – as an officer and gentleman – the villagers are doubly divorced from it: as demonic embodiments of pure evil and as subhuman beasts. Through their representation as cannibals, the Africans are relegated from political space – they came to Tarzan's domain as refugees from King Leopold's atrocities – to a fantastic ahistorical space, the space of nightmare. Questions of political responsibility and personal guilt are thus closed off; the lynch justice meted out later on by the French punitive expedition – sparing 'no single warrior of all the savage

village of Mbonga' (TA 163) – appears justified. The life of a single white man is of incomparably greater value than the lives of an entire African village. Tarzan, whose ability to differentiate between true and lesser humans is growing apace, understands this instinctively:

> Tarzan had looked with complacency upon their former orgies, only occasionally interfering for the pleasure of baiting the blacks; but heretofore their victims had been men of their own colour.
>
> Tonight it was different – white men, men of Tarzan's own race – might be even now suffering the agonies of torture in that grim, jungle fortress. (TA 156)

From this second cannibal scene, where again nobody gets eaten, a further set of slightly different conclusions can be drawn: (1) A white man must never become the victim of cannibals. (2) Cannibalism is something that savages are allowed to do to other savages. (3) Cannibalism transforms savages into beasts. (4) Cannibalism does not have to be represented, indeed it does not have to happen, in order to be accepted as fact. The last point is borne out by the sequel: after the massacre of the villagers, the French soldiers try to discover D'Arnot's fate, communicating with the survivors in 'the bastard tongue that passes for language between the whites and the more degraded tribes of the coast', with no result: 'Only excited gestures and expressions of fear could they obtain in response to their inquiries concerning their fellow; and at last they became convinced that these were but evidences of the guilt of these demons who had slaughtered and eaten their comrade two nights before' (TA 163). The narrative in effect shows how cannibalism is constructed on the basis of scant facts and failed communication, in the service of the power politics of imperialism. But the appraisal of the Africans is not revised: they remain cannibals and demons. From this one could draw a fifth, final conclusion: (5) The others are cannibals because cannibals are always the others.

* * *

This apparently straightforward situation in *Tarzan of the Apes* can be submitted to a more complex reading. On the one hand, the barbarity of exotic peoples is expressed most strongly in their imputed anthropophagic inclinations. They are savages, therefore they must be cannibals; they are cannibals, therefore they are uncivilised, brutish and savage. Or, as Michael Taussig comments in reference to a different

example, 'the imaginative range essential to the execution of colonial violence [...] was an imagining drawn from that which the civilized imputed to the Indians, to their cannibalism especially, and then mimicked'.[14] Precisely because of this tautological structure, cannibalism functions as an efficient difference marker. On the other hand, however, cannibalism is also a fluid signifier, fluid like the *pharmakon* – it refuses to stay attached to a particular referent and becomes, potentially at least, universal: 'the cannibal epithet at one time or another has been applied by someone to every human group'.[15] As a difference marker, cannibalism is unstable and therefore, unreliable.

In imperial fiction of the late nineteenth century, the cannibal fantasy shows two sides: the fear of being eaten and the fear of eating. The passive mode of incorporation is a staple of the first contact scene: the adventurer who meets for the first time one of the barbaric peoples at the imperial fringe is always in danger of being cooked and eaten for his pains. This certainly is a horror scenario, but the threat against the self is contained in two ways: first, the hero of such stories after all succeeds in making an escape. As could be seen in *Tarzan*, the literary cannibal feast is always anterior or posterior, it is about to happen and it happened in the past, but it does not take place in the actual present.

Secondly, it happens to others. Savages are not only the perpetrators of cannibalism, they are 'eatable', while the white traveller usually acts as a saviour, the one who interrupts and, in the best case, ends the horrific practice. As far back as *Robinson Crusoe*, the roles are already clearly distributed: the white observer is quite external to the cannibal feast, he watches from afar and only intervenes in order to end it; the actual participants, as consumer and consumed, are always the others.[16] The cannibal fantasy only becomes a part of anthropological anxiety when it moves closer to home, when the European traveller really becomes involved. And then, the danger of eating is more threatening to his integrity then the danger of being eaten. If cannibal practice is the mark of otherness, then eating human flesh is the surest sign that the white man has irrevocably crossed the border from self to Other.

* * *

The invitation to supper, not where he eats, but where he is eaten, is extended frequently to the hero who is taken prisoner by cannibal tribes. A typical example is Joseph Hatton's adventure novel *Captured by Cannibals* (1888), in which the hero's identity – including his manliness, his integrity, and his class and national allegiance – is

negotiated through the encounter with cannibals. The protagonist, Horace Durand, finds himself in many respects in a precarious position: the son of a French father and an English mother, he is brought up on a diet of classical adventure tales – Odysseus, Fénélon's Télémaque and Robinson Crusoe are his heroes. Having grown up, Horace falls in love with the eminently suitable Helen Dunstan, a rich neighbour's daughter. However, a premature happy ending is deferred by the young man's inconstancy. He is now in every sense an outcast: estranged from his mother, disinherited by his uncle who raised him after his father's death, separated from the woman he truly loves, he can redeem himself in one way only – by proving his mettle on the imperial testing-ground.

At stake are both the class order, disrupted by Horace's sexual indiscretion with the daughter of a factory worker, and the definition of national identity. In the latter respect, Horace is in an intermediate position from the beginning, being half-French and half-English. But in contrast, for instance, to Becky Sharp's Frenchness which makes her the socially disruptive force of William Thackeray's *Vanity Fair* (1847–48), national hybridity is not necessarily negative in *Captured by Cannibals* – the French father is a wholly lovable figure. Nevertheless, it is one of the reasons for the son's outsider status. He has to resist the temptation to decadence and illicit sexuality associated with France and lower-class femininity. Only in the imperial space he can reinvent himself as a British hero.

Following diverse adventures at sea, Horace is cast away on the island of Bulanogan in the Malayan archipelago. Unlike his model Robinson Crusoe, however, he does not succeed in setting himself up as the monarch of the island; instead, he is captured by a hideous-looking tribe of cannibals and destined for the cooking-pot. This ending is momentarily deferred, but only for a fate worse than death: 'It turned out that I was considered the booty of the women' (CC 99). He becomes the personal property of Lofulu, the ex-chief's daughter:

> I represented a sort of annual gift in acknowledgment of their assistance on sea-raids; a tribute ordained by the god of the Bulonagans, when it was believed he had drunk too much 'arackie'. If once in so many moons the women chose to rescue a fugitive from death he was theirs. They made him their slave, or ate him, whichever pleased them best. This gift was not only regarded as the result of the intoxication of the god of the island, but was considered to be indicative of the contempt the Bulonagans entertained for the white man. They

> had no real intercourse whatever with Europeans, and were regarded even by other dusky inhabitants of these eastern seas with fear, and dread, and loathing. (CC 100)

Horace now finds himself in the position of the Other's Other, the object of ritual humiliation of the most subordinate and abject group imaginable: the women of a tribe untouched by civilisation and despised even by their neighbours. Horace succeeds in extricating himself from his predicament with the help of a mysterious figure, the king of Kututu, 'a tall warrior, far lighter in colour than the others' (CC 112), who turns out to be – Irish. Of course, the Irish are the United Kingdom's internal Other, the inferior race, symbolically associated with other 'lower races' like the Africans, and equally marked with the stigma of cannibalism.[17] The introduction of an Irish cannibal king reinforces the stereotype of the savage Irish, but it also points to the internal division of Britain and the long tradition of subjection on the side of the English, as the king tells Horace: 'you're no fellow-countryman o'mine; niver a bit would I be here at all if it had not been for the persecution of the Saxon' (CC 116). It is only the traditional alliance of the Irish with the French that determines the king to help him. Horace's hybridity saves him from the cooking-pot and the ultimate amalgamation with the Other in the natives' bellies.

The relations between purity and hybridity are complex in Hatton's novel: the racially and culturally purest group are the Bulanogan, but this is precisely the reason for their abjection. Englishness is presented from the beginning as an embattled field.[18] And while Horace's double affiliation appears at the beginning as problematic, it is also associated with Europe's literary culture: only through his French father is Horace familiar with the blueprints that enable him to nobilitate the imperial adventure. He is both a new Télémaque who completes his education through the confrontation with other cultures, and a Robinson Crusoe who, despite the vicissitudes he has to undergo with respect to the cannibal ladies, succeeds in the end in exporting British civilisation.

The other displaced, hybrid protagonist, the Irish king of Kututu, realises in the end that the isolation of his people is no longer viable under the pressures of imperial commerce, and commissions Horace to make overtures for the annexation of the island by the British government: 'He thinks the protection of the British flag would lead to a development of the country, the capacity of which for the exportation of tropical produce is very great' (CC 127). The cannibal story is now reversed: in order to wean the islanders from eating stranded Europeans,

their country is offered as a choice morsel to be devoured by the British Empire.

The novel ends, on the one hand, with an affirmation of the *grand récit* of imperialism and the civilising mission, on the other hand, on a more sombre note, with a lament about the unspoiled life of the Bulanogans now to be destroyed. The denigration of the Bulanogans is put in perspective: on biological grounds they occupy the lowest rung on the evolutionary ladder; but in cultural terms, their crude fiendishness cannot compete with the refined cruelties of the 'superior' European civilisation:

> Although the Bulanogans are as wicked a type of savage as the old Fijians, I saw nothing in their island more barbarous than the old English ducking-stool, the crank, or the thumb-screw; while the records of the Italian inquisition are far ahead of anything in the way of torture that the history of the Persians, the North American Indians, or the Bulonagans can identify. In judging the natives among whom I was a captive, therefore, I am bound to say that the worst thing I know of them is that they eat human flesh. (CC 109–10)

Well-read Horace here echoes Montaigne's essay on cannibals. His comparison between Bulanogans and Europeans shows the ambivalent effect of 'cannibalism' as *pharmakon*: on one level, it functions as the mark of the natives' savagery and beastliness, depicting them as completely Other with regard to an exclusive definition of 'the human'; but simultaneously, a worse lack of humanity is claimed for the 'higher civilisation' of Europe. The culture that invented the humanist ideal also brought forth the inquisition.

The fear of eating

The other side of cannibalism, even more closely associated with the anxiety of assimilation, is the possibility that the European traveller could himself become a consumer of human flesh. The traveller's fear of being devoured by the natives is generally associated with culinary or ritual cannibalism, i.e. with more or less ceremonial, habitual anthropophagy. The fear of eating by contrast becomes acute under the circumstances of survival cannibalism. Discovery fiction is studded with scenarios in which marooned persons have to face eating their peers as the only option of survival. The dissolution of the human–animal boundary in both physical and moral terms in *The Island of Dr Moreau* is heralded by a prelude in which Prendick, at sea after the shipwreck of the *Lady Vain*, is ready to yield to the temptation of drinking a fellow-passenger's blood.

The narrative obeys the law that cannibalism cannot be represented, and the scheme comes to nothing because the two other men on board the dinghy struggle and fall overboard. But cannibalism has been considered as a serious option, and with this loosening of the moral code Prendick is irretrievably compromised. Cannibalism represents a double threat to the European subject:

> As the modern Western ego is founded upon faith in production, progress, and individual autonomy, the cannibal inversely represents consumption, regress, and the annihilation of discrete identity. While serving thus as a mirror to the European subject, the cannibal threatened to swallow it, both literally, and also through representing the danger of 'going native,' which would cause the civilised man to return to an original state of barbarism.[19]

The Tarzan novels are, as we have seen, obsessed with the theme of cannibalism. The question whether someone is fully human, half-human, or bestial is decided by his or her – in this instance, both genders are concerned – readiness, or refusal, to eat human flesh. This does not only apply to racially different groups whose *in*humanity (rather than animality, since animals – in the world of Tarzan if not in nature – do not devour members of their own species) is reinforced by their habitual cannibalism. Cannibalism is also used in the novel as an internal difference marker within ethnic groups. 'Good natives' such as the Waziri who elect Tarzan as their king in *The Return of Tarzan* are distinguished from Mbonga's people by the fact that they are *not* man-eaters, a higher moral status that is mirrored in their 'human' looks: 'Tarzan was again impressed by the symmetry of their figures and the regularity of their features – the flat noses and thick lips of the typical West Coast savage were entirely missing. In repose the faces of the men were intelligent and dignified, those of the women ofttimes prepossessing.'[20] Conversely, 'evil whites' are characterised by their propensity to choose cannibalism over starvation. Before I discuss these examples in greater detail, I will take a look at the role cannibalism – or rather its rejection – plays in Tarzan's rise from ape to man.

Tarzan kills the first man he ever meets, Kulonga, the murderer of his foster-mother Kala. That this retaliation is entirely justified is never questioned. The doubt sets in after the kill. Tarzan recognises in Kulonga a being like himself, a man, but he also perceives differences – the black skin, the ornaments, the filed teeth: 'He examined and admired the tattooing on the forehead and breast. He marvelled at the sharp filed teeth. He investigated and appropriated the feathered head-dress, and then he prepared

to get down to business, for Tarzan of the Apes was hungry, and here was meat; meat of the kill, which jungle ethics permitted him to eat' (TA 63). Now Tarzan's double mode of being comes into play: while he is always already a born gentleman, he is simultaneously progressing from ape to man. At the time of action, he is still in an intermediate state, still untutored in the human moral code – all he has are 'jungle ethics'. And by this relative standard, the narrator explains in a direct address to the reader, he is to be judged (while the Africans' transgression is not to be pardoned on the grounds of cultural difference): 'How may we judge him, by what standards, this ape-man with the heart and head and body of an English gentleman, and the training of a wild beast?' (TA 63) However, heredity proves stronger than habit – Lord Greystoke does not commit the deed:

> Of a sudden, a strange doubt stayed his hand. Had not his books taught him that he was a man? And was not The Archer a man, also?
>
> Did men eat men? Alas, he did not know. Why, then, this hesitancy! Once more he essayed the effort, but of a sudden a qualm of nausea overwhelmed him. He did not understand.
>
> All he knew was that he could not eat the flesh of this black man, and thus hereditary instinct, ages old, usurped the functions of his untaught mind and saved him from transgressing a worldwide law of whose very existence he was ignorant. (TA 64)

Critics like Peter Hulme and Marianna Torgovnick have pointed out the inconsistencies in this part of *Tarzan of the Apes*:[21] while the taboo against eating human flesh is a *universal* law, the man about to be eaten by Tarzan is a cannibal himself, and in the very next scene, Tarzan will 'witness' the man-eating rites of Kulonga's tribe. The simple solution of the paradox is that only those beings can be called truly human who respect the taboo of cannibalism *under all circumstances*, even if they are not familiar with it, like Tarzan, or if their abstinence results in a slow and painful death, as in Jane's case in *The Return of Tarzan*.

* * *

In the second volume of Tarzan's adventures, we find Jane, at the end of the first book nobly renounced by the hero, engaged to be married to his cousin William Cecil Clayton. On a cruise around the world, Jane's party is shipwrecked. With her fiancé, a villain called Monsieur Thuran and two sailors she is adrift without provisions in a small boat on the open sea. The gradation in moral force and 'humanity' between the passengers

begins to manifest itself under the pressure of thirst and hunger. The sailors are the first to succumb to their animal instincts. In an act of displaced auto-cannibalism, they eat their own shoes and leather belts:

> Weak and hopeless, the entire party lay beneath the pitiless tropic sun, with parched lips and swollen tongues, waiting for the death they were beginning to crave. The intense suffering of the first few days had become deadened for the three passengers who had eaten nothing, but the agony of the sailors was pitiful, as their weak and impoverished stomachs attempted to cope with the bits of leather with which they had filled them. (RT 153)

As the first of them dies, the other sailor proposes to eat him, but is repulsed by the upper-class passengers – for the time being. His suffering drives him into madness, into bestiality: 'Like a wild beast his teeth sought the throat of his intended prey, but Clayton, weak though he was, still found sufficient strength to hold the maniac's mouth from him' (RT 154). Although at first Thuran takes Clayton's side, he later comes up with the proposal of sacrificing one of them for the benefit of the others. This defection from the 'universal law' is aggravated by the fact that it is born out of cold reason, not the animal despair of the lower classes: 'Jane Porter […] was horrified. If the proposition had come from the poor, ignorant sailor, she might possibly have not been so surprised; but that it should come from one who posed as a man of culture and refinement, from a gentleman, she could scarcely credit' (RT 155). His acceptance of cannibalism precisely unmasks Thuran's gentlemanly attitude as a pose.

Indeed, Thuran's utter depravity manifests itself as he manipulates the subsequent drawing of lots in his favour. The remaining sailor looses, but prefers to drown himself instead of submitting to the procedure he had at first voted for. After more days of suffering, Thuran proposes to draw again, and Clayton agrees in the hope that 'the sacrifice of either Thuran or himself might be the means of giving her renewed strength' (RT 157). In other words, he justifies his consent to the cannibal pact with the idea of feeding his own or Thuran's flesh and blood to the dying Jane – possibly saving her life, but polluting her by the unholy communion. Inevitably, Clayton loses; before submitting to his fate, he says goodbye to his unconscious fiancée:

> When Clayton reached the girl's side she was unconscious – he knew that she was dying, and he was glad that she should not have to see or know the awful tragedy that was shortly to be enacted. He took

> her hand and raised it to his cracked and swollen lips. For a long time he lay caressing the emaciated, clawlike thing that had once been the beautiful, shapely white hand of the young Baltimore belle. (RT 158)

While Jane is the only passenger in the boat who is not involved in the cannibal transaction, and therefore the only one who remains morally untainted, she is reduced in a different way to an animal: to a pure, suffering body. This reduction to naked life, to *zoē*,[22] is represented in the synechdoche of the 'clawlike thing', the abject remainder of a once human being.

The novel from now on takes a curious turn: a lot of sadistic energy is directed against the heroine. In the first volume, Jane was repeatedly in distress and had to be saved by Tarzan, but she always remained a self-controlled subject. In *The Return of Tarzan*, the near-starvation in the boat is only the first scene in a series where her mind is reduced to a comatose state, her body to a mass of quivering, dying flesh. Is the drawn-out abjection of the female body a punishment for her wavering loyalty to Tarzan? This possibility is at least suggested by the subsequent juxtaposition of Tarzan's physical glory to Jane's debility:

> The very night that Tarzan of the Apes became chief of the Waziri the woman he loved lay dying in a tiny boat two hundred miles west of him upon the Atlantic. As he danced among his naked fellow savages, the firelight gleaming against his great, rolling muscles, the personification of physical perfection and strength, the woman who loved him lay thin and emaciated in the last coma that precedes death by thirst and starvation. (RT 159)

What is the relation between Jane's diminution to a 'hideous thing' (RT 175) and the discourse of cannibalism employed in the novel? The ground where both meet is the abject human body. Maggie Kilgour has described the paradoxical structure of cannibalism: it is used to establish difference between 'us' and 'the others'. But 'the act itself involves the complete and utter loss of difference' – again, the structural similarity to the *pharmakon* is evident:

> This unsettling of discrete categories is part of its horror: it is the place where desire and dread, love and aggression meet, and where the body is made symbolic, the literal figurative, the human reduced to mere matter. In fact, cannibalism involves both the *establishing* of absolute difference, the opposites of eater and eaten, and the

> *dissolution* of that difference, through the act of incorporation which identifies them, and makes the two one.[23]

Jane is reduced from a human being, from a beautiful woman, to mere matter at a moment when all categories break down. In the liminal state between life and death in which the passengers are held in suspense, the difference between 'gentleman' and 'poor, ignorant man' is erased. Their readiness to commit a cannibal act dissolves the difference between civilised men and savages, between humans and beasts. In fact, the only difference that is upheld throughout is that of gender: by virtue of being a woman, Jane is excluded from the macabre lottery. She is also psychologically removed from the conflict because she is unconscious during the decisive scenes between Clayton and Thuran. The female body is thus the only space that remains pure, untainted by the acceptance of cannibalism.

Simultaneously, Jane's sufferings are described in greatest detail. She is the only one who is discursively deprived of her human status, who becomes a 'thing'. The abjection of the female body at this juncture can thus be read as a symptom for the anxiety of assimilation that assails the male body: the representative of the European upper class, the heir-apparent of the Greystokes, succombs to the temptation of cannibalism – at least potentially, Clayton erases the difference between eater and eaten. In the parallel plot, the real Lord Greystoke, Tarzan, has reverted to a savage state and will continue his regression until he reaches apehood again. The place of the white male subject, the gentleman, who guarantees the hierarchical order both at home and in the imperial space, is temporarily empty. In a rather unfair textual move, this crisis of masculinity is visited on the female body. Jane will continue to suffer until the full reconstitution of the male subject.

The vicissitudes of regression

Tarzan: the joy of regression

In *Tarzan of the Apes*, the hero recapitulates the stages of human evolution from ape to civilised man. In the sequel, he retraces his steps in the opposite direction. His reverse evolution sets in with a disillusioned stock-taking of modern civilisation and its discontents:

> '*Mon Dieu!*' he soliloquized, 'but they are all alike. Cheating, murdering, lying, fighting, and all for things that the beasts of the jungle

> would not deign to possess – money to purchase the effeminate pleasures of weaklings. And yet withal bound down by silly customs that make them slaves to their unhappy lot while firm in the belief that they be the lords of creation enjoying the only real pleasures of existence. In the jungle one would scarcely stand supinely aside while another took his mate. It is a silly world, an idiotic world, and Tarzan of the Apes was a fool to renounce the freedom and the happiness of his jungle to come into it.' (RT 16–17)

Monsieur Tarzan can appreciate some of the pleasures that life in Paris, as the guest of the courteous D'Arnot, gives him, for example the conversation with his fellow-humans or the joy of reading good books. But at the same time, he feels ill at ease, 'but half civilized even now', a misfit who suffers under the constraints of civilisation: 'Let me see red in anger but for a moment, and all the instincts of the savage beast that I really am, submerge what little I possess of the milder ways of culture and refinement' (RT 24).

Following various adventures in which his main adversary is the villainous Russian Rokoff – identical with that Monsieur Thuran who will later invite the unfortunate Clayton for dinner – Tarzan is recruited by the French Secret Service and sent to the colony of Algeria. With this voyage across the Mediterranean begins his backward journey through time. The trajectory of regression leads him from the existence of a 'wild and savage beast' in the midst of civilisation to a life with semi-civilised Arabs, then adoption by the African Waziri, an encounter with missing links, and finally, a return to the apes with which the full 'cycle of evolution' (RT 197) is completed.

Paradoxically, Tarzan pursues the path toward regression in order to avoid the trap of degeneration posed by modern culture. Regression becomes coterminous with a recovery of masculinity. On board the ship to South Africa, Tarzan is pushed overboard by Rokoff. The sudden immersion into the waters of the Atlantic is the death of the civilised man Tarzan has become and the rebirth of the savage, as he by and by strips off the outward symbols of a civilised existence: 'As he swam, guided toward the east by the stars, he noticed that he felt the weight of his shoes, and so he removed them. His trousers went next [...]. Before many hours he had divested himself of his remaining garments, and was swimming easily and unencumbered toward the east' (RT 117). As chance will have it, Tarzan reaches the coast at a point which is 'strangely familiar' (RT 118) – he is washed ashore near his birthplace, the cabin his father built long ago. With

the uncanny return to his point of origin, Tarzan's recapitulation of phylogeny in reverse begins in earnest: 'Tarzan of the Apes had come into his own again, and that all the world might know it he threw back his young head, and gave voice to the fierce, wild challenge of his tribe' (RT 118). With his return to the jungle, he is able to enjoy the full freedom of the ape instead of the compromised 'way out' of the half-tamed human animal who feels ill at ease amid the restrictions of modern life:

> With the first dizzy swing from tree to tree all the joy of living swept over him. Vain regrets and dull heartache were forgotten. Now was he living. Now, indeed, was the true happiness of perfect freedom his. Who would go back to the stifling, wicked cities of civilized man when the mighty reaches of the great jungle offered peace and liberty? Not he. (RT 119)

The unfettered jungle existence appears as the natural state of man. The only link that potentially binds him to a civilised state is woman, presented in the Tarzan novels as antithetical to man's freedom: 'a woman's "yes" would have bound him to that other life forever, and made the thought of this savage existence repulsive' (RT 121).

Tarzan has now reverted to his former existence, but he has not experienced the company of men without being changed. He has discovered his gregarious nature and also the existence of a higher code of behaviour than the 'jungle ethics' he was taught by the apes. Thus, as he stalks an African hunter, coveting the weapons that make the hunt so much easier, Tarzan hesitates to kill him – and, instead, saves his life as the hunter is attacked by a lion. In gratitude, Tarzan is accepted as one of their own by the man's tribe, the warlike, noble Waziri: 'Except for color he was one of them' (RT 130). His sojourn with the Waziri forms the centre of the novel. Even more than the Arabs, the African tribe provide him with the ideal compromise between the despised European civilisation and a solitary life in the jungle: congenial human company, good sport, and adoration for his prowess as a hunter and warrior. Following a successful campaign against Arab slave raiders, in the course of which the old king is killed, Tarzan is unanimously elected 'Waziri, king of the Waziri'. He is now formally integrated into the tribe, but remains, due to his white skin, his mental and physical superiority, and his experience of the life of animals and the world of white men, an outsider, more like a God worshipped by the savages than one of their own.

The difference is only submerged in the joy of the hunt or in the ecstasy of the feast:

> As the excitement waxed the ape-man sprang to his feet and joined in the wild ceremony. In the center of the circle of glittering black bodies he leaped and roared and shook his heavy spear in the same mad abandon that enthralled his fellow savages. The last remnant of his civilization was forgotten – he was a primitive man to the fullest now; revelling in the freedom of the fierce, wild life he loved, gloating in his kingship among these wild blacks. [...] And so Tarzan of the Apes came into a real kingship among men – slowly but surely was he following the evolution of his ancestors, for had he not started at the very bottom? (RT 149)

The last sentence points to the multiple, conflicting time schemes of the novel. From the point of view of an ape-man – and former king of the apes – Tarzan's position as king of the Waziri is an ascent. But within the plot of *The Return of Tarzan*, it is a downward move on the evolutionary scale, an intermediary stage on a trajectory that will lead him still further into human prehistory. On the macro-level of the series, evolution is viewed as cyclical. If the two first books in the Tarzan series are taken together, we get an up and down and up again curve: Tarzan rises steadily from Kala's son to Lord Greystoke's heir, then again plunges into apehood, completing the first 'cycle' of evolution, and finally re-emerges triumphantly as Greystoke, connecting past and future, jungle and high society, by his marriage to Jane in his father's cabin. But underlying the two dynamic time schemes, upward and downward mobility within the framework of human evolution, and the cyclical master pattern, there is also a structure of simultaneity: of already being that which he is still in the process of becoming, and of retaining what is apparently lost. So Tarzan is always already Lord Greystoke, even as he is still climbing up the ladder to modern humanity. Conversely, on his relapse into savagery and finally apehood, he remains a civilised man, a master over those who have never left the jungle.

The horror of regression: the lost race of Atlantis

From his sojourn in civilisation, Tarzan has not only retained a taste for company and a sense of morality, but also a desire for gold. Although he ostensibly despises civilised man's greed, he is not free from it himself: 'of a sudden the sight of gold awakened the sleeping civilization that was in him, and with it came the lust for wealth. That lesson Tarzan

had learned well in his brief experience of the ways of civilized man. He knew that gold meant power and pleasure' (RT 128). This human desire propels him out of the timeless bliss he experiences with the Waziri, into another, historically further removed anachronistic space that is not joyful but horrific. In order to acquire the wealth that is useful in a higher station of life, he must descend to an even lower form of (pre)human existence. According to the elder among his warriors, the source of the jewels of solid gold they are wearing is a far-off city, inhabited by 'wicked people – neither white like you nor black like me, but covered with hair as is Bolgani, the gorilla' (RT 128–9). *The Return of Tarzan*, having in its turn evolved through different generic stages – social satire, romance, spy novel – now turns into a lost world narrative. In his search for gold, Tarzan stumbles upon the mysterious city of Opar and its inhabitants, ape-like missing links. The hairy men of Opar do not only connect man to his prehistoric past, but to his mythic origins: the lost civilisation of Atlantis.[24]

Burroughs here draws on a configuration which is already popular in the imperial romances of the nineteenth century, for example Rider Haggard's *King Solomon's Mines* or *She*. The remains of highly developed civilisations found in Africa are explained – not just in novels, but also in the writings of historians and cultural anthropologists[25] – by a 'white origin'. In this variant of the lost world novel, a superior but degenerate civilisation of Greek, Hebrew or Phoenician origin survives surrounded by a culturally inferior black population. In the present case, Opar was founded by the mother civilisation of Atlantis as a colonial outpost, to serve as the administrative centre for gold-mining operations in Africa. In fact, from his studies Tarzan is already familiar with this myth:

> Tarzan recalled something that he had read in the library at Paris of a lost race of white men that native legend described as living in the heart of Africa. He wondered if he were not looking upon the ruins of the civilization that this strange people had wrought amid the savage surroundings of their strange and savage home. Could it be possible that even now a remnant of that lost race inhabited the ruined grandeur that had once been their progenitors? (RT 162)

Marianna Torgovnick calls the standard plot element of the lost civilisation 'profoundly political' in the way it establishes a certain view of Africa as outside history, a passive, 'feminine' continent unable to produce a high culture of its own – or to exploit its own natural resources: 'The Tarzan novels gave enduring cultural life to the idea that

civilizations in Africa were of white origin. They helped shape popular (mis)conceptions of Africa and its (non)past.'[26] Torgovnick interprets the quote given above – Tarzan informing himself about the secrets of Africa at the Paris library – as a naturalisation of the colonial subjection of Africa:

> It is significant and fully in accord with dominant primitivist tropes that these legends invoke the unknown 'heart' or 'center' of Africa, even when the African site that is the source is really in the east or south. The coreness implies both geographical isolation and typicality, the quintessence of Africa, with riches or knowledge, or both, being the 'bribe' for penetrating the hazardous African terrain. The masculine sexual metaphors of penetrating closed dark spaces no doubt help account for the West's attachment to the trope of the center, heart, or core of Africa. African landscape is to be entered, conquered; its riches to be reaped, enjoyed.[27]

The trope of a 'penetration' into the 'heart' of Africa is already established by explorers like Stanley and, of course, finds its strongest embodiment in Conrad's *Heart of Darkness*. The displacing of Africa from history into anachronistic space, its transformation from a politically and geographically organised, inhabited continent into an 'empty', unstructured landscape is the condition for the fictional trajectory of imperial fiction which is also closely linked to the gendered semantics of the territory. In Burroughs's series of novels, Tarzan is the active subject, a student of distinction, a reader of differences. But he performs these activities in a conflictual relationship with culture. In this case, it is precisely woman's association with culture that renders her an obstacle to man's movement through space. The African space of freedom is associated with masculinity: with the quintessentially masculine activities of hunting and killing, and with male-dominated groups like the Waziri. Or rather, in its passivity, its penetrability, its lack of structure, Tarzan's country is semantically 'female', while the activities taking place in it are very masculine: abduction, combat, warfare.

The city of Opar lies both 'in the heart' of Africa and at the periphery of Tarzan's usual territory. It is a place where history has stopped: with the mysterious end of Atlantis, the exchange with the metropolitan home culture, or any other culture, was interrupted. The abandoned colonists continued to mine for gold, but they did not trade. The result is not only cultural stagnation, but biological regression. The

male inhabitants Tarzan meets have reverted to a prehuman stage. Phenotypically, they are missing links:

> The thick, matted hair upon their heads grew low over their receding brows, and hung about their shoulders and their backs. Their crooked legs were short and heavy, their arms long and muscular. About their loins they wore the skins of leopards and lions, and great necklaces of the claws of these same animals depended upon their breasts. Massive circlets of virgin gold adorned their arms and legs. For weapons they carried heavy, knotted bludgeons, and in the belts that confined their single garments each had a long, wicked-looking knife.
>
> But the feature of them that made the most startling impression upon their prisoner was their white skins – neither in color nor feature was there a trace of the negroid about them. Yet, with their receding foreheads, wicked little close-set eyes, and yellow fangs, they were far from prepossessing in appearance. (RT 165)

But the most astonishing aspect about this lost people is the marked difference between its men and women: 'The females were more symmetrically proportioned than the males, their features were much more perfect, the shapes of their heads and their large, soft, black eyes denoting far greater intelligence and humanity than was possessed by their lords and masters' (RT 168). This is especially true of the high priestess, La, whom Tarzan meets under rather unfavourable circumstances.

The king of the Waziri has recklessly penetrated into the dark spaces of the unknown city, a passage described in clearly sexualised terms: Tarzan 'passed on into the depths of the temple', a cry warns him 'not to enter this particular chamber' but this is 'sufficient to treble Tarzan's desire to do so', within 'all was black as the tomb', 'the corridor upon which it opened was itself in semi-darkness', and finally, 'feeling before him upon the floor with the butt of his spear, Tarzan entered the Stygian gloom' (RT 164). The temple is semantically feminine not only because of its closeness and darkness, but because it actually belongs to women; the city is ruled by a caste of matrilinear priestesses. Tarzan's overdetermined rape is swiftly punished: he is seized by the temple's guardians, bound and prepared as a sacrifice for the Sun god. The high priestess is about to plunge her knife into Tarzan's heart as one of the attendants runs amok and attacks her. Tarzan breaks his bonds and saves her; she falls in love with him – 'You are such a man as I have seen in my daydreams ever since I was a little girl' (RT 172), and compared to

the hairy alternatives he is probably not a bad choice – and hides him from her bloodthirsty compatriots. From La, Tarzan learns about the history of her people and the inevitable further degeneration that will result from their cohabitation with apes:

> In fact, the apes live with us, and have for many ages. We call them the first men – we speak their language quite as much as we do our own; only in the rituals of the temple do we make any attempt to retain our mother tongue. In time it will be forgotten, and we will speak only the language of the apes; in time we will no longer banish those of our people who mate with apes, and so in time we shall descend to the very beasts from which ages ago our progenitors may have sprung. (RT 173)

Here, Tarzan is confronted with a darker version of the regression to apehood: not a joyous recovery of freedom, but a descent into a dim, hideous, malignant beastliness. The priestesses who guard the sacred language and the religious rites of the ancient culture are the only agency that slows down the horrible dissolution of boundaries. In the society of Opar, women function indeed as an obstacle to men's regressive movement; this is even enacted in their religious ritual: 'a female figure dashed into the midst of the bloodthirsty horde, and, with a bludgeon similar to their own, except that it was wrought from gold, beat back the advancing men' (RT 166). As part of the ceremony, the priestess symbolically claims the sacrificial victim for the Sun god. The desire of the undifferentiated horde is transformed by the woman's intervention into ritual, the horde becomes a society. The male missing links represent an amorphous Other out of which a female subject forges structure, difference and culture. But the cultural activity of the women is positive only within the lost world community. The society of Opar is built on human sacrifice and the drinking of human blood; consequently, it represents a perversion of 'real society'. Women's rule is in fact the symbol of this perversion.

The different phenotypes – the human appearance of the women and the simianness of the men – are explained, somewhat curiously, by a separate heritage: the priestesses are descended from 'the noblest daughters of the race', while 'only the lower types of men remained here at the time of the great catastrophe' (RT 173). Although inevitably the two strains mixed, and were further adulterated by miscegenation with apes, the priestesses were able to preserve their racial purity. Of course it doesn't make sense. But the importance of the Opar episode lies in the

alternative picture of society it presents, a society in which women have power and are the sole guardians of culture: it is bloody, superstitious and doomed. This, Tarzan learns, is what happens when men turn their backs on culture and associate too closely with apes.

Gender trouble in the primeval forest

While Tarzan continues his evolutionary descent, the castaways complete their own evolutionary cycle and revert to a state of primitive humanity. The micro-society of Jane, Clayton and Thuran is another version of human civilisation gone wrong because the gender roles do not work. In this case, it is the men who fail to meet the requirements of ideal masculinity, in particular the chivalric protection of women. Clayton is barely able to find enough food for their sustenance; moreover, he proves inadequate in defending Jane from Thuran's molestations: 'She could not well refrain from comparing the scant protection afforded her by Clayton with what she might have expected had Tarzan of the Apes been for a single instant confronted by the sinister and menacing attitude of Monsieur Thuran' (RT 177). The moral failure of both men manifests itself outwardly in a transformation into primeval men, not only primitive but ridiculous. To cover his nakedness, Clayton fashions himself a garment 'of numerous small pelts of different species of rodents' – a far cry from Tarzan's sexy lion skin loincloth – presenting 'a rather strange and wonderful appearance, which, together with the vile stench which permeated it, rendered it anything other than a desirable addition to a wardrobe'. Thuran imitates him, and 'with their bare legs and heavily bearded faces, they looked not unlike reincarnations of two prehistoric progenitors of the human race. Thuran acted like one' (RT 180–1).

Following her reduction to an abject 'thing' in the shipwreck episode, Jane now has to sustain a further attack on her person, including the integrity of the body. Again, this is due to a meltdown of civilisation, expressed in the failure of patriarchy to protect its women. Jane, left alone by Clayton and Thuran, is abducted by a band of Oparians. The physical proximity between their grotesque forms and the white woman is presented as a revolting dissolution of the boundary between the self and the Other. The sense of revulsion is heightened by the sexual connotation of the 'abduction'. As Marianna Torgovnick has noted, the 'threat of miscegenation' pervades all the Tarzan novels, but 'miscegenation [...] must never occur'.[28] Of course, the Oparians are not at all interested in Jane as a woman, but only as the next sacrificial victim for their god. But this can in fact be read as a displacement of

rape: 'unspeakable' things will happen to her in the primeval forest. Unclean objects will enter her body and taint her purity. To this threat, Jane can react only with a helpless withdrawal into unconsciousness, or a refusal – as in the shipwreck episode – to consume unclean food: 'a piece of this repulsive stew was tossed to her from the foul hand of a nearby feaster. It rolled close to her side, but she only closed her eyes as a qualm of nausea surged through her' (RT 194). Even as she refuses to touch the repulsive food, the abject overwhelms her body. Deprived of male protection, Jane cannot guard herself against becoming a 'thing', yet again:

> For many days they traveled through the dense forest. The girl, footsore and exhausted, was half dragged, half pushed through the long, hot, tedious days. Occasionally, when she would stumble and fall, she was cuffed and kicked by the nearest of the frightful men. Long before they reached their journey's end her shoes had been discarded – the soles entirely gone. Her clothes were torn to mere shreds and tatters, and through the pitiful rags her once white and tender skin showed raw and bleeding from contact with the thousand pitiless thorns and brambles through which she had been dragged.
>
> The last two days of the journey found her in such utter exhaustion that no amount of kicking and abuse could force her to her poor, bleeding feet. Outraged nature had reached the limit of endurance, and the girl was physically powerless to raise herself even to her knees. (RT 194)

Having refused the creatures' food, she has herself become a piece of bloody meat: her body is now 'raw' and bleeding. What Jane has to undergo is never called rape, however, the nightmarish march through the jungle cannot fail to evoke the possibility. The symbolic rape of the temple committed by Tarzan is reciprocated on his woman as Jane is dragged through the jungle. The forcing of her body is to be consummated in the very temple desecrated by Tarzan, ending in the final crossing of boundaries: the consumption of Jane's blood by the missing links of Opar. Again, like the prospect of rape by the ape Terkoz in the first volume, this is a possibility that is never realised: Tarzan intervenes at the last minute, saves Jane and gives her the primeval man's irresistible kiss: 'He took the girl he loved in his strong arms, and kissed her not once, but a hundred times, until she lay there panting for breath; yet when he stopped she put her arms about his neck and drew his lips

down to hers once more' (RT 212). The natural gender order is restored as panting Jane is clasped in her man's embrace, demanding more.

With this kiss, and the final reunion of Tarzan and Jane, the gendered aspect of the anxiety of assimilation can be laid to rest. The couple had to pass through a series of quasi-experimental situtations in which their humanity was tested: Jane's near-participation in cannibalism and near-sacrifice at Opar, Tarzan's association with the Arabs, the Waziri, the people from Opar and the apes. Jane underwent her tribulations passively; her only means of resistance was to withdraw into unconsciousness. Tarzan entered all his adventures of his own free will, indeed he could be described as hyper-active. The gender-marked difference of the brush with the primitive is remarkable: while Jane is reduced twice to an abject bundle of abused flesh, Tarzan can exercise and enjoy his full physical power. In the end, Tarzan rejects the temptation of regression, marries Jane and reclaims his father's heritage. But this is an uneasy solution. The sadistic impulse the narrative directs against the female body epitomises the awkward position of woman as both a necessary vanishing point for man's evolution and claim to mastery, and as a disturbing element in the male economy of the novel. Marriage, the classical ending of romance, closes the action. But closure is antithetical to the series, and so one of the main problems faced by the following novels will be how to get rid of Jane and how to get Tarzan back to the apes. His embrace of Jane and of civilisation will always be interrupted by the call of the wild.

Strange encounters with missing links

Happy miscegenation

The word 'miscegenation' was first introduced in a pamphlet published during the American Civil War: *Miscegenation: The Theory of the Blending of the Races Applied to the American White Man and Negro*.[29] Its authors claim that 'miscegenation, far from producing degeneration as Gobineau and his American sympathizers had claimed, would have altogether beneficial effects, in this case by arresting the people of the United States from their alleged current decline, and increasing their fertility and vigour so as to form them into a new super-race'.[30] Racial purity is indeed a form of inbreeding, while the grafting of an intellectually superior but physically weak race on simple, hardy stock will result in renewed strength: 'We must become a yellow-skinned, black-haired people – in fine we must become Miscegens – if we would attain the fullest results of civilization.'[31] It is, in fact, the idea of regression

as regeneration, celebrated in *Tarzan*, transferred from the diachronic axis of evolution to the synchronic axis of sexual mixing. However, the pamphlet is not a premature advocacy of *mestizaje* or hybridity, postcolonial theory *avant la lettre*, but 'a hoax, written by two violently anti-Abolitionist New York journalists'.[32] As part of a strategy to discredit the Republican agenda of slave emancipation, the authors address the greatest anxiety among the category crises of the 1860s: the fear that the racial boundary could be undermined by sexual desire.[33]

The anxiety about horizontal assimilation, interracial sexual relations, was closely associated with the fear of vertical assimilation, regression. In imperial romances, both concerns are negotiated in lost worlds, anachronistic spaces in which linear time makes a strange loop, bringing together modern men with their supposedly extinct forebears. The most famous of these novels, giving the genre its name, is Arthur Conan Doyle's story about missing links found on an isolated South American plateau.[34] However, as this is an all-male story, the narrative hinges on the exclusion of and emancipation from women. As a result of this focus on the masculine, the fear of miscegenation as such plays only a subsidiary role. Before returning to *The Lost World* as an example of the anxiety of vertical assimilation, or the fear of the missing link, I will therefore begin by considering another lost world narrative which explicitly treats the anxiety of miscegenation: William Westall's *A Queer Race: The Story of a Strange People* (1887).

Similarly to the narrator of *The Lost World*, journalist Edward Malone, the first-person narrator of *A Queer Race* is an ordinary young man, not cut out at a first glance for romance and adventure. Sidney Erle works as an insurance agent, responsible for shipping. While investigating a case of insurance fraud, he hears from the sailor Thomas Bulsover about the wreck of the *Santa Anna* in the Caribbean in 1744, laden with a fabulous treasure. He joins Bulsover, who hopes to find the treasure, on a voyage to Monte Video. Their journey, ending in a shipwreck, is a repetition of the disastrous voyage of another ship, the *Hecate*, in the eighteenth century; the *Hecate*'s survivors were taken on board the *Santa Anna*. Erle learns about it from a manuscript in Bulsover's possession, written by the chaplain of the *Hecate*. Erle and Bulsover are the only survivors of their own shipwreck, which happens to take place just where the *Santa Anna* foundered a century and a half earlier. The castaways are saved by the natives of a Caribbean island:

> The boat came on apace, and the nearer she drew, the more puzzled I became. The rowers being naked to the waist, I naturally saw a good

> deal of them; but whether they were red men dabbed with black, or black fellows dabbed with red, I was unable to determine, and as yet I could see little or nothing of their faces. Of the two men in the stern, however, I had a very fair view. Their faces were queer, very queer. The elder of them seemed to have a reddish eye and a white one; and the left cheek of the other differed in colour from the right. As the elder turned his head, moreover, I perceived that he sported a pigtail. Their coats, of some dark material, were large and roomy, and adorned with brass or gold buttons; their nether garments were white; and, to crown it all, they wore cocked hats, such as I had seen nowhere but in old-fashioned pictures and on the stage.[35]

The scene is strongly reminiscent of Prendick's first view of Dr Moreau's islanders: the men in the boat resist classification, they are 'Other' in a vague, disconcerting way. The men in the Captain Hornblower outfits turn out to be, as one might have expected, the descendants of the crews of the *Hecate* (English) and *Santa Anna* (Spanish), who mixed with the indigenous, Carib, population of the island. Their present culture – as the travellers learn in a chapter appropriately entitled 'English, By Jingo!' – is predominantly Puritan English.

The 'grafting' of this superior race on the primitive but hardy indigenous stock had felicitous results: although the members of the new hybrid race are piebald, and consequently 'queer' to look at, they are in fact vastly superior to the English visitors: they far surpass them in strength, agility and acuteness of the senses. In a symbolic race of the races, the hybrid win over the pure:

> We two were continually lagging behind, and more than once Fane gave us a look which expressed both pity and contempt, as if he thought us very poor creatures indeed. This riled me exceedingly, and I did my utmost to overtake him; but he was in splendid fettle; the more I strove the faster he went, and when after a fifteen minutes' spurt we reached town, I was completely blown and bathed with perspiration, while he was not even flushed, and breathed as quiet as an infant. (QR 148)

Amyas Fane is the descendant of the captain of the *Hecate*, who imposed severe laws on the community. Indeed, it is the combination of Puritan discipline with the physical qualities of the Caribs that produced the super-race in a rigid selection process. Only because the 'superior' Anglo-Saxon race retained its dominance over both Spaniards and

Caribs did miscegenation indeed have the beneficial results ironically foretold in Croly and Wakeman's hoax. The mingling of races in the isolated biosphere of the island amounted to an experimental situation in which evolution – based on the Lamarckian idea of transmitting acquired characteristics to the next generation – was accelerated. From the crew of the *Hecate*, only the fittest survived (QR 166).

Significantly, these events take place in the Caribbean which is, according to Peter Hulme, 'a special place, partly because of its primacy in the encounter between Europe and America, civilization and savagery, and partly because it has been seen as the location, physically and etymologically, of the practice that, more than any other, is the mark of unregenerate savagery – cannibalism'.[36] But one of the most striking aspects about the representation of the piebald race is the complete elision of that 'special, perhaps even defining, feature of the discourse of colonialism as it pertained to the native Caribbean'.[37] The 'savage' ingredients of the racial mix, the indigenous Caribs, are *not* cannibals.

The description of miscegenation in predominantly positive terms demands the denial of man-eating. The problem of the Carib-cannibal link is solved with the help of a technique already familiar from other imperial fictions: the splitting of the Other into a good, assimilable and an abject, irredeemable savage. Thus, the indigenous inhabitants are divided into the good Caribs with whom the survivors of the *Hecate* and the *Santa Anna* can mate, and the evil 'Cariberos' who are associated with cannibalism – their enslaved descendants are called 'Calibans' – and who are, although apparently originating from one of the neighbouring islands, racially inferior to the native Caribs: the Cariberos are 'negroes' while the original skin colour of the Caribs was brown (or 'red').

The 'happy miscegenation' of Fair Island is, in effect, the result of a double displacement: the onus of cannibalism is shifted from the Caribs to the Cariberos, and the onus of invasion and dispossession is deflected from the Europeans. The latter unite with the original inhabitants and fight off the real invaders, the Cariberos. The vanquished 'negroes' are enslaved, but cannot be entirely kept under control: the slaves mix with the indigenous population, just as the Europeans do. As a result, the three original groups – Europeans, Caribs and Cariberos – evolve into two distinct races: the super-race of Euro-Carib descent and the 'spotted Calibans' who serve as their slaves, and who represent the horror version of miscegenation:

> The six rowers were the most hideous creatures I had ever seen, even in a nightmare. Their predominating colour was deep black, dabbed

> with red and yellow patches in a singularly arbitrary and irregular fashion. Thus, one man had a red nose in the middle of an otherwise jet-black face. Another had a red mouth; another, again – and I think he was the most horrible-looking of the lot – had red eyelids and a red upper lip, all the rest of his vizard being of the deepest ebony. Add that the pupils of their eyes were indistinguishable from the iris, and the whites large and streaked with blood, their noses huge and flat, their mouths wide, with blubber, negro-like lips, their foreheads narrow and tattooed, and that they wore bone rings in pendulous ears, and you may form some idea of the appearance of these Calibans (the name, as I afterwards heard, actually bestowed on them by the islanders). (QR 141)

Why the merging of Caribbean Indians and people of, presumably, African descent should result in yellow, black and red mottled skin is one of the mysteries of pseudo-scientific racist fantasies. Indeed, the above description is one of the worst racist images to be found in imperial fiction – embedded in a narrative that celebrates the improving effects of miscegenation. Evidently, the anxiety about boundary dissolution cannot be repressed; it can only be displaced onto the Other's Other. The novel's uneasiness about its own programme emerges at other points as well: in concerns about purity within miscegenation, and in fears about the return of the repressed, i.e. a slave revolt and a renewed invasion.

Despite their mixed descent, the ruling race of Fair Island have remained symbolically pure. Although the crews of the *Hecate* and the *Santa Anna* married Carib women, the indigenous culture was excluded from contributing to the invention of the new community. The founder and first ruler, Captain Denzel Fane, married the Spanish captain's daughter, the only European woman available. Fane introduced the English language and English customs on the island, including Christianity – the details of the negotiations between Spanish Catholics and English Protestants are passed over in silence. In any case, Fane's model was 'the fittest' in the community's cultural evolution: he succeeded in establishing a Commonwealth along the lines of the English Puritan experiment, even assuming the title of 'Protector'. At the time of Erle's arrival, Fane's family still rules the country due to their inherited superiority:

> In his own family Denzil Fane made the practice of athletics and the training of the senses a religious duty, whereby it came to pass that

> his descendants were distinguished by exceptional bodily strength, litheness of limb, acuteness of hearing, and keenness of vision. Owing to their descent from two European ancestors, moreover (though Fane's children had necessarily intermarried with Caribs and half-breeds), they were whiter and less piebald than the other families of mixed blood, and formed a true aristocracy, not by right of birth merely, but by virtue of their physical and moral superiority, which was probably the end Fane had in view. (QR 177)

In a society whose foundational act was the amalgamation of two races, purity is the badge of distinction, a paradoxical construction disclosing the anxiety underlying the seeming approval of assimilation. This anxiety is clearly discernible in the present encounter between modern Englishmen and Fane's lost race. Fair Island is ruled by Queen Mab, who represents the purity-within-amalgamation valorized in the novel:

> 'Her face was [...] white, and her complexion pure. A mass of black curls rested like a coronet on a broad and noble brow, and her flashing, gipsy-like eyes, slightly aquiline features, firm mouth, and broad chin, bespoke at once intelligence, high courage, and strength of will' (QR 152). But although she is beautiful according to European standards, 'she evidently belonged to the same queer race as her people'; the traces of miscegenation are visible on her body, hidden by her dress: 'Though her face was white (comparatively, for she was a decided brunette), the lower parts of her neck and throat were hued with bronze; so also were her arms and one of her feet' (QR 152).

The problem of the Fair Island community is its cultural inbreeding; the inhabitants preserved English culture in the state of the early eighteenth century. Erle functions as an agent of renewal both on a biological and a cultural level: by marrying the queen, he will strengthen the 'white strain' of the ruling elite, and he will modernise their society. The islanders are overwhelmed by the technological and cultural advances made by the mother country, from safety matches to sensation novels.[38] Erle's task is now to introduce them to the standards of modern culture while preserving the old English virtues. He saves the community from the internal threat, the danger of degeneration that would result from continued inbreeding and cultural inertia. But he also preserves Fair Island from the exterior peril, the joint attack of the Calibans and

Cariberos. Sidney Erle, with his superior knowledge of modern military strategy – acquired, no doubt, in the insurance business – is appointed general and leads the settlers' army to victory. This demonstration of his military skills, based on intelligence rather than strength, also shows why he is eligible to claim the *über*-maiden on the throne, despite his relative physical weakness.

After the rebellion is quelled, Queen Mab and Erle get married and leave for an educational trip to England. As the bride declares: 'Now that we are no longer in fear of the Carib [sic] invasion, I can easily be spared for a few months. And I want to see England. We are very backward. We must have more books, and a printing press and machinery, and other things' (QR 298). The queen's confusion over the terms Carib and Caribero – the good savage within and the bad savage out there – betrays the confusion and irresolution reigning at the end of the novel: the island community will be opened to modern technology, but it will explicitly maintain its isolation; the slaves will be set free (inspired by the queen's reading of *Uncle Tom's Cabin*), but what kind of economy will replace the old plantation system remains unclear. Finally, although Queen Mab's marriage to Erle will disrupt the system of endogamy, it is represented as a singular event between one man and one woman – enough to ward off the complete, destructive miscegenation looming in the future, the mixing of Fane's descendants with the Calibans?

Exterminating the missing link

The anxiety evoked by queer people resisting classification is dealt with in a more rigorous manner in Arthur Conan Doyle's novel *The Lost World* (1912). While the lost world of *A Queer Race* was the scene of accelerated evolution, seeing the formation of new races within a century, Conan Doyle's isolated plateau is a place where time came to a standstill:

> An area, as large perhaps as Sussex, has been lifted up *en bloc* with all its living contents, and cut off from all the rest of the continent. What is the result? Why, the ordinary laws of Nature are suspended. The various checks which influence the struggle for existence in the world at large are all neutralized or altered. Creatures survive which would otherwise disappear. You will observe that both the pterodactyl and the stegosaurus are Jurassic, and therefore of a great age in the order of life. They have been artificially conserved by those strange accidental conditions. (LW 35)

This explanation, given by Professor Challenger, the head of the expedition, is obviously wrong in scientific terms: even in isolation, the evolution of species continues, as Darwin demonstrated with reference to the Galapagos fauna. Therefore it would be unlikely to discover the very same dinosaurs on the South American plateau as are found fossilised in other parts of the world. Besides, the isolation was never complete. Of the three populations living on the plateau, dinosaurs, ape-men and Indians, only the Jurassic animals are truly indigenous. The human-like groups entered the place in successive waves; an evolutionary struggle between ape-men and Indians is in full swing as the British explorers arrive.

In addition to journalist Edward Malone, Professor Challenger and his colleague Summerlee, the crew is completed by Lord Roxton, an adventurer, hunter and fighter against slavery whose humanitarian activities are however somewhat cavalier: for every slave-trader he kills, he makes a nick on his rifle. Trophy-hunting and taking a 'stand for human rights' (LW 52) become indistinguishable. The slavery theme, which the novel shares with *A Queer Race*, is important in two ways. Roxton's campaign is a direct cause of the explorers' entrapment on the plateau: one of their porters, brother of a slave-trader killed by Roxton, destroys the improvised bridge connecting the plateau to the external world. More important, the aristocratic adventurer's declaration of humanitarian principles is irreconcilable with the solution found for the problem of the ape-men: 'The males were exterminated, Ape Town was destroyed, the females and young were driven away to live in bondage, and the long rivalry of untold centuries had reached its bloody end' (LW 160). While in Westall's novel the encounter between modern Englishmen and islanders results in the abolition of slavery, the establishment of Pax Britannica on the plateau begins with a massacre and the introduction of slavery on a permanent basis. The principles professed at the beginning of the novel thus clash with the ending that is described as bloody but justified. Man's evolutionary triumph is corroborated by the division of the plateau's inhabitants into human slave-owners and anthropoid slaves.

This moral shift is one of the disturbing moments of the novel. Roxton is, more than any other expedition member, the epitome of Englishness (Malone is Irish), and his anti-slavery position is an important ingredient in British self-definition, also given in other imperial romances such as R.M. Ballantyne's *Black Ivory*: 'the nation which hates slavery because the Great God hates it, and would have all men to be free, to serve each other in love, and to do to other people as they would have

other people do to them'.[39] Despite Britain's long history as the leading nation in the transatlantic slave-trade in the seventeenth and eighteenth centuries, at the end of the nineteenth, to be an Englishman has become synonymous, at least in the world of these adventure novels, with being a campaigner against slavery.[40] The extinction of the male ape-men and the enslavement of the surviving women and children is thus a significant breakdown of this humanitarian position. It can only be justified by the 'non-humanity', the animality of the ape-men. But the descriptions of these strange inhabitants of the plateau show their uncanny closeness to humans:

> They went in single file, with bent legs and rounded backs, their hands occasionally touching the ground, their heads turning to left and right as they trotted along. Their crouching gait took away from their height, but I should put them at five feet or so, with long arms and enormous chests. Many of them carried sticks, and at the distance they looked like a line of very hairy and deformed human beings. (LW 142)

Very hairy, very deformed, but still human. This passage recalls Paul Du Chaillu's description of gorillas as upright, hairy men, his doubts about the justification of hunting and killing these human-like creatures, and the greater excitement of the hunt *because* of this likeness.

In Roxton's case, the human likeness only intensifies his hatred and his wish to kill the ape-men, while he is forced to acknowledge their, at least partial, humanity: 'they are ahead of any beast I have seen in my wanderin's. Apemen – that's what they are – Missin' Links, and I wish they had stayed missin'' (LW 137–8). He continues to emphasise their animality, that is, to deny their human aspect, continuously calling them 'filthy beasts' (LW 139). The ape-men confirm Roxton's negative assessment by their treatment of captive Indians: 'The men were little red fellows, and had been bitten and clawed so that they could hardly walk. The ape-men put two of them to death there and then – fairly pulled the arm off one of them – it was perfectly beastly' (LW 139). The missing links might look human, but their inhuman behaviour identifies them as beasts.

By contrast, the childlike 'little red fellows' demonstrate their humanity by their courage: 'Plucky little chaps they are, and hardly gave a squeak. But it turned us absolutely sick' (LW 139–40). Despite Roxton's infantilising and animalising description – the Indians do not speak but squeak, like cute little mice – the lines of affiliation are clear: on the one

side the cruel beasts, on the other the plucky Indians and the compassionate Europeans. The relations between the expedition crew and the Indians are profoundly unequal: while the European 'parents' profess to protect the native 'children', their first act is to make the Indian warriors carry their stores (LW 147). Nevertheless, civilised and primitive men form a natural unit, the Family of Man from which the missing links are excluded.

However, the clear dividing-line between the human and the Other is disturbed in one respect: the ape-men 'adopt' Challenger as one of their own. Because of his great likness to their chief – 'a sort of red Challenger' (LW 138) – he must appear to *them* as a missing link. But this similarity does not provoke hatred and disgust, but a deferential treatment: 'Old Challenger was up a tree, eatin' pines and havin' the time of his life' (LW 139). Roxton and Malone, the only ones to have escaped the ape-men's raid, observe from their hiding-place a truly strange encounter:

> The one was our comrade, Professor Challenger. The remains of his coat still hung in strips from his shoulders, but his shirt had been all torn out, and his great beard merged itself in the black tangle which covered his mighty chest. He had lost his hat, and his hair, which had grown long in our wanderings, was flying in wild disorder. A single day seemed to have changed him from the highest product of modern civilization to the most desperate savage in South America. Beside him stood his master the king of the ape-men. In all things he was, as Lord John has said, the very image of our Professor, save that his colouring was red instead of black. The same short, broad figure, the same heavy shoulders, the same forward hang of the arms, the same bristling beard merging itself in the hairy chest. Only above the eyebrows, where the sloping forehead and low, curved skull of the ape-man were in sharp contrast to the broad brow and magnificent cranium of the European, could one see any marked difference. At every other point the king was an absurd parody of the Professor. (LW 144)

Or, from the ape-men's perspective, the professor is a parody of the king. The distinction between man and missing link becomes dangerously unstable. In order to save their companion from assimilation into the simian tribe, and the other professor from execution, Roxton and Malone have to become savages in their turn: 'the blood lust was on me now' (LW 145). They shoot as many ape-men as they can and

liberate Summerlee and Challenger. In the final battle which follows, the 'natural' hierarchy is restored: the civilised Europeans are on top, protecting the savage 'children', while the incommensurable ape-men, the 'Other' both to Europeans and Indians, are destroyed. The threat of the uncanny missing link is warded off, and the explorers are free to return to civilisation.

Mourning the missing link

A completely different tone reigns in *Green Mansions*: love is the predominant emotion shown to the missing link; and yet hatred and disgust are not absent from the novel. The author, William Henry Hudson, grew up in Argentina and spent many years travelling the South American continent as a collector of ornithological specimens for the Smithsonian Institution in Washington and the Zoological Society of London. In 1874, at the age of 33, he sailed to England where he made a living as an author of natural history books and novels. He is thus writing, not from the perspective of a British explorer of an exotic country, but as colonial exiled from the eden-like country of his childhood.[41]

The most striking feature of *Green Mansions*, first published in 1904,[42] is the loving, delicate description of nature, of the magical sounds of the forest, the antics of small animals, the beauty of birds and plants. The novel's protagonist and narrator, the Venezuelan Abel Guevez de Argensola, called Mr Abel, is a political refugee living in Georgetown, British Guyana. As an elderly man, he tells his British friend, the editor of the manuscript constituting the main narrative, the story of his life:

> Since boyhood I had taken a very peculiar interest in that vast and almost unexplored territory we possess south of the Orinoco, with its countless unmapped rivers and trackless forests; and in its savage inhabitants, with their ancient customs and character, unadulterated by contact with Europeans. To visit this primitive wilderness had been a cherished dream; and I had to some extent even prepared myself for such an adventure by mastering more than one of the Indian dialects of the northern states of Venezuela.[43]

Abel realises his Conradian desire for the blank spaces on the map by exploring the Amazon territory bordering on Colombia and Brazil. For the Indians, whose languages he speaks and with whom he lives for many months, he reserves only contempt. In fact, the triangular structure typical of imperial fiction is reproduced even in this novel: the unique creature Abel finds in a virgin forest in the Parahuari hills is

opposed to the Indian tribe living nearby who are described in deeply racist terms. While Rima, the forest girl, becomes the unattainable object of his desire, the Indians, who never do him any harm until he provokes them, are objects of fear and disgust: 'I regard them [...] as beasts of prey, plus a cunning or low kind of intelligence vastly greater than that of the brute' (GM 13).

The theme of evolutionary rivalry resulting in extinction, represented in Conan Doyle's *The Lost World*, is also taken up in *Green Mansions*. Although Hudson's novel is in many respects a much gentler version of the imperial romance – an eco-romance celebrating intact nature and mourning the extinction of species – the two representatives of the Other, the forest girl and the Indians, are played out against each other in a terrible struggle for survival.

Just as the Caribbean is the imaginary site of cannibalism, so the Latin American continent is denoted as the space of extinction, the first locale of a large-scale genocide which ended in the extermination of considerable parts of the indigenous population. Darwin witnessed the last phase of the systematic displacement of the Indians during his sojourn in Argentina, in the decade before Hudson's birth. In *The Voyage of the Beagle*, he describes the 'tame' Indians employed by the Argentine president General Rosas as killers: '[I]t was impossible to conceive anything more wild and savage than the scene of their bivouac. Some drank till they were intoxicated; others swallowed the steaming blood of the cattle slaughtered for their suppers, and then being sick from drunkenness, they cast it up again, and were besmeared with filth and gore.'[44] These Indians are linked both metonymically – by drinking and vomiting animal blood – and metaphorically – their behaviour during the feast and their blood-lust in the fights the next day – to animals. The Indians are thus thoroughly made abject as, literally, bloodthirsty killers. But of course, their foes, the targets of Rosas's campaign, are also Indians. These mercilessly hunted and decimated groups represent the complementary image of Indians as victims, treated as animals – to be slaughtered:

> The Indians, men, women, and children, were about one hundred and ten in number, and they were nearly all taken or killed, for the soldiers sabre every man. The Indians are now so terrified that they offer no resistance in a body, but each flies, neglecting even his wife and children; but when overtaken, like wild animals, they fight against any number to the last moment. [...] My informer said, when he was pursuing an Indian, the man cried out for mercy, at the same

> time that he was covertly loosing the bolas from his waist, meaning to whirl it round his head and so strike his pursuer. 'I however struck him with my sabre to the ground, and then got off my horse, and cut his throat with my knife.' This is a dark picture; but how much more shocking is the unquestionable fact, that all the women who appear above twenty years old are massacred in cold blood! When I exclaimed that this appeared rather inhuman, he answered, 'Why, what can be done? They breed so!' (VB 90)

The humanitarian traveller is shocked at these excesses, and observes with regret that 'I think there will not, in another half century, be a wild Indian northward of the Rio Negro' (VB 91). Darwin describes the imperial expansion as, essentially, a failure of the civilising mission. Taking possession of land by the descendants of the original Spanish conquerors results not only in the extinction of the natives, but also in the survivors' relapse into barbarity: 'Not only have whole tribes been exterminated, but the remaining Indians have become more barbarous: instead of living in large villages, and being employed in the arts of fishing, as well as of the chase, they now wander about the open plains, without home or fixed occupation' (VB 92).

* * *

This digression on Darwin's South American sojourn helps to establish the parameters of Hudson's novel regarding the representation of Indians as the incommensurable Other. The two images which are at the author's disposal are that of the cruel, bloodthirsty savage or that of the desperate, hunted victim. To this imaginary archive Hudson juxtaposes the fictitious race of the forest girl. Rima represents man's lost connection to nature. She appears to Abel at first to be part of the woods she inhabits: for a long time it remains unclear whether the being that makes itself heard through music – 'a low strain of exquisite bird-melody, wonderfully pure and expressive, unlike any musical sound I had ever heard before' (GM 26) – and of whom he catches only fleeting glimpses, is a supernatural being, a spirit of the forest, as the Indians believe, or a wild girl, a forest-dweller of flesh and blood. Rima's unity with nature manifests itself in the changes of her skin colour which, chameleon-like, adapts to her surroundings:

> Beneath the trees, at a distance, [her skin] had seemed a somewhat dim white or pale grey; near in the strong sunshine it was not white,

> but alabastrian, semi-pellucid, showing an underlying rose-colour; and at any point where the rays fell direct this colour was bright and luminous, as we see in our fingers when held before a strong firelight. But that part of her skin that remained in shadow appeared of a dimmer white, and the underlying colour varied from dim, rosy purple to dim blue. (GM 54)

Her iridescent colour is the sign of her closeness to nature, connecting her with other beings such as serpents, moths or humming-birds, all characterised by the splendour of their colouring and the fragility of their form. Rima is also linked to the animals of the forest in another way: she protects them from harm. Indeed, the first encounter between Abel and Rima takes place as he tries to kill a poisonous serpent. Rima boldly intervenes, and Abel is promptly bitten. But, as it soon turns out, the real poisoners of the paradisiac scene, this primeval encounter between man, woman and snake, are the human beings dwelling at its fringe. The Indians, Abel's hosts, are Rima's bitter enemies because she prevents them from hunting in the woods.

The novel divides the different protagonists very clearly along moral and aesthetic lines. Rima, whose 'face [...] so greatly surpassed in loveliness all human faces I had ever seen or imagined' (GM 52), is also the embodiment of gentleness, purity and a resolutely ecological and vegetarian position. The Indians, ruthless hunters and meat-eaters, are described as ugly and disgusting. They are not romantic; rather, they view nature in a completely materialist way, as a source of both food and danger, a space in which they try to survive. The conflict between the two positions is carried out in evolutionary terms, as an uncompromising struggle for survival. Abel, the only figure who can move freely between the different topographical and moral spaces of the novel, is also the only one who can fully appreciate Rima's beauty. Almost uniquely among the protagonists of imperial fiction, he falls in love with her *because* of her qualities as a missing link, the union of animal characteristics with human reason:

> But more than form and colour and that enchanting variability was the look of intelligence, which at the same time seemed complementary to and one with the all-seeing, all-hearing alertness appearing in her face; the alertness one remarks in a wild creature, even when in repose and fearing nothing; but seldom in man, never perhaps in intellectual or studious man. She was a wild, solitary girl of the woods, and did not understand the language of the country in which

> I had addressed her. What inner or mind life could such a one have more than that of any wild animal existing in the same conditions? Yet looking at her face it was not possible to doubt its intelligence. This union of her two opposite qualities, which, with us, cannot or do not exist together, although so novel, yet struck me as the girl's principal charm. (GM 55)

Although the comparison may seem far-fetched, Rima is the female counterpart to Tarzan, uniting within herself the animal and the human. Just like the king of the apes she can find her way in the forest as no man can, she communicates with animals, and finds a sense of freedom only in the wilderness. But whereas Tarzan is a killer, the ultimate specialist in survival, Rima has no defences against the encroachment of civilisation and is destined to perish in the evolutionary conflict with other humans.

Rima's incompatibility with a domesticated human mode of life becomes evident in Abel's next meeting with her, as he comes to his senses after a dangerous illness induced by the snake bite. He finds himself in the hovel of an old man, Nuflo, who introduces Rima as his grand-daughter. In the demure, silent girl who tends him Abel hardly recognises the splendid creature of the woods. She resembles the forest girl, but instead of the gossamer dress matching the opalescent colours of her skin, eyes and hair she wears a drab cotton garment, and her 'loose cloud of hair' is confined in two plaits: 'The face also showed the same delicate lines, but of the brilliant animation and variable colour and expression there appeared no trace. Gazing at her countenance, as she stood there silent, shy, and spiritless before me, the image of her brighter self came vividly to my mind, and I could not recover from the astonishment I felt at such a contrast' (GM 63).

A quiet young woman doing drudge work in her foster-grandfather's hut, Rima is a pale shadow of the unfettered, spirit-like being of nature he encountered earlier. Civilisation, even in its humblest form in Nuflo's primitive household, is described as oppressive. At the same time, Rima yearns for the company of people of her own kind. The mystery of her origin, in particular the question whether Rima is alone of her kind, a singular freak of nature, or the last representative of a 'lost race', preys greatly on Abel's mind: 'No, this exquisite being was without doubt one of a distinct race which had existed in this little-known corner of the continent for thousands of generations, albeit now perhaps reduced to a small and dwindling remnant' (GM 53).

Rima's own desire to discover her origins is the reason for a journey the three undertake to the distant mountains of Riolama – of which

Rima is an abbreviation –, the place where years ago Nuflo met her pregnant mother. After her mother's death, Nuflo raised Rima as his own grandchild. The travellers really succeed in finding the site of this first encounter, but an 'origin' behind it is irrecoverably lost. There are no survivors of Rima's people. Abel explains to the girl the phantasmatic nature of her quest: 'From that summit you would see nothing but a vast dim desert, mountain and forest, mountain and forest, where you might wander for years, or until you perished for hunger, or fever, or were slain by some beast of prey or by savage men; but oh, Rima, never, never, never would you find your people, for they exist not' (GM 147). Although he believes in the existence of others like her, he believes in them only as a lost race. The receding mountain ranges symbolise the structural impossibility of finding the point of origin. Rima is the only trace left of her people, as was her mother before her.

Like Plato's hermaphrodites, Rima's people represent the desire for a primal unity, a state before the differentiation between, not man and woman, but human and animal, reason and nature. But this differentiation is the price to be paid for the establishing of civilisation, and only a refined intellectual like Abel can feel nostalgia for the undivided state. The Indians with their animalism, their closeness to a nature that lives and speaks and threatens, that cannot be controlled by man, are unable to regard the forest girl as a sacred being. Her benevolence to animals means that the Indians, on the verge of extinction themselves, are deprived of sustenance. And so Rima falls victim to their struggle for survival.

* * *

Abel hopes to return through Rima to a prelapsarian state in which language can be dispensed with, in which love itself is the medium of communication: 'And gazing with those open, conscious eyes, it seemed to me that at last, at last, the shadow that had rested between us had vanished, that we were united in perfect love and confidence, and that speech was superfluous. And when I spoke it was not without doubt and hesitation: our bliss in those silent moments had been so complete, what could speaking do but make it less!' (GM 152) The scene in which Abel woos and apparently wins Rima is imbued with irony because, in fact, he cannot understand her. The conversation takes place in Spanish; the bird-like sounds which are to her the only true language, the language of nature and of the heart, are completely beyond his comprehension. While he feels that they have recovered the lost unity, and thereby

overcome the division that is the human condition, Rima is not content with silent bliss. She has a different interpretation of love as a medium of communication: '"Oh, Abel, can you understand – now – at last!" And putting her lips close to my ear, she began to murmur soft, melodious sounds that told me nothing' (GM 154). At this moment, the perfect union – or the illusion of the perfect union – is shattered: 'As she had said to me once when I asked her to speak in Spanish, "That is not speaking." And so long as she could not commune with me in that better language, which reflected her mind, there would not be that perfect union of soul she so passionately desired' (GM 155). Immediately following this imperfect love scene, Rima declares that she will return to her forest in advance of the others. Abel has no choice but to let her go; when the two men reach the place several weeks after, Rima is nowhere to be found.

The recovery of unity promised by the romance plot is illusory. The romance structure is disturbed and finally destroyed by the structure of the evolution narrative. The words spoken by Professor Challenger after the extinction of the missing links, 'the future must ever be for man' (LW 159), is echoed, not triumphantly, but bitterly, in *Green Mansions*. As they find out upon their return to Nuflo's hovel, Rima was killed by the Indians. During her absence, the Indians had taken up the habit of hunting in the wood. On her sudden return, they pursued her until she took refuge in a huge tree. Moved by their fear and hatred of what they considered an evil spirit, they built a pyre around the trunk:

> Then they set fire to it on all sides, laughing and shouting, 'Burn, burn, daughter of the Didi!' At length all the lower branches of the big tree were on fire, and the trunk was on fire, but above it was still green, and we could see nothing. But the flames went up higher and higher with a great noise; and at last from the top of the tree, out of the green leaves, came a great cry, like the cry of a bird, 'Abel! Abel!' and then looking we saw something fall; through leaves and smoke and flame it fell like a great white bird killed with an arrow and falling to earth, and fell into the flames beneath. And it was the daughter of the Didi, and she was burnt to ashes like a moth in the flames of a fire, and no one has ever heard or seen her since. (GM 173–4)

Dying, Rima seems to confirm her love for Abel, but her lover does not hear her, he cannot save her. Rima'a cruel death reveals the human capacity for evil, the powerlessness of love and the emptiness, the godlessness of the world: 'Did you know, beloved, at the last, in that intolerable heat, in that moment of supreme anguish, that *he* is

unlistening, unhelpful as the stars, that you cried not to him? To me was your cry: but your poor, frail fellow-creature was not there to save, or, failing that, to cast himself into the flames and perish with you, hating God' (GM 177). Abel can only avenge her, and thereby perpetuate the evil committed by the Indians. Savagery is not confined to savages, Abel learns, as he first kills his friend Kua-kó – 'when [...] the blood spurted afresh, I experienced a feeling of savage joy' (GM 176) – and then instigates a neighbouring hostile tribe to kill Rima's murderers: 'For they were all dead at last, old and young, all who had lighted the fire round that great green tree in which Rima had taken refuge, who had danced round the blaze, shouting, "Burn! burn!"' (GM 180) True, Abel regrets what he has done as he sees the victims of the massacre, but the 'hellish enterprise' cannot be undone.

In the end, Abel, the man who came from civilisation and will return to it, is the only survivor (Nuflo was also murdered by the Indians). Although the future is his, he has no future: he lives on in a world from which beauty and love have gone, a world from which God has disappeared. Abel acknowledges the death of the forest girl, the last of her people, as a necessity of evolution, but one that makes evolution pointless. She who was the finest product of the evolutionary process has simply disappeared – 'this bright being, like no other in its divine brightness, so long in the making, now no more than a dead leaf, a little dust, lost and forgotten for ever' (GM 177) – overpowered by a coarser competitor, who was in turn killed as senselessly and as cruelly: 'But I knew it all before – this law of nature and of necessity, against which all revolt is idle: [...] only now it seemed cruel beyond all cruelty' (GM 177). His experiences turn Abel into a hollow man who spends the rest of his life mourning Rima, frozen in a moment outside history, a Stone Age of the mind and an apocalyptic future at the same time.

If in some cases regression offers relief from the constraints of civilisation, in *Green Mansions* it is a gesture of despair. Having become a savage, Abel desires to be a stone. His longing for stasis is also the rejection of the idea that the future can bring solace, that evolution is progress to a better kind of humanity. The higher, finer being has been vanquished by the coarser, lower one. The means and the end of evolution, whether it is indeed a blind, mechanical process or whether it is directed by an 'unseen unknown something, or person, that manifests itself in the horrible workings of nature' (GM 177), is death. The Darwinian insight into human continuity with nature is a far cry from the vision of harmony found in natural theology. The glimpse of the truth Abel catches is a vision of horror and emptiness.

5
Cultural Pessimism and Anthropological Anxiety

The longer one stays here the more does the spirit of the moor sink into one's soul, its vastness, and also its grim charm. When you are once out upon its bosom you have left all traces of modern England behind you, but, on the other hand, you are conscious everywhere of the homes and the work of the prehistoric people. On all sides of you as you walk are the houses of these forgotten folk, with their graves and the huge monoliths which are supposed to have marked their temples. As you look at their gray stone huts against the scarred hillsides you leave your own age behind you, and if you were to see a skin-clad, hairy man crawl out from the low door, fitting a flint-tipped arrow on to the string of his bow, you would feel that his presence there was more natural than your own.

Arthur Conan Doyle, *The Hound of the Baskervilles* (1901)[1]

There is the old brute too, the savage, the hairy man who dabbles his fingers in ropes of entrails; and gobbles and belches; whose speech is guttural, visceral – well, he is here. He squats in me. To-night he has been feasted on quails, salad, and sweetbread. He now holds a glass of fine old brandy in his paw. He brindles, purrs and shoots warm thrills all down my spine as I sip. It is true, he washes his hands before dinner, but they are still hairy. He buttons on trousers and waistcoats, but they contain the same organs.

Virginia Woolf, *The Waves* (1931)[2]

Races of the past and of the future

Stone Age stories

This chapter considers narratives of cultural decline and degeneration, narratives culminating in the destruction of civilisation as we know it. However, I will begin with the apparent opposite of such catastrophic writings: with fantasies about the beginnings of mankind. Stories about the rise of man from early hominid to 'true human', about the original transition from animality to humanity, seem to reflect Huxley's dictum about the splendour of man's capacities that allow him to leave his animal heritage behind and to rise to a position 'as on a mountain top, far above the level of his humble fellows' (MPN 112). The notion implied in Huxley's *Man's Place in Nature* that man's 'rise' was, not contingent, as Darwin had claimed, but rather a necessary result of 'natural', linear progress, is reflected in prehistoric fiction.[3] But these, mankind's success stories, also contain the seed of the destruction that will, one day, inevitably follow: a primary guilt on which the act of instituting civilisation is built – the first murder, the first war, the first oppression accompanying the invention of tools, the establishment of a community, the emergence of rudimentary laws. Civilisation itself is thus equalled with a 'fall' from a state of nature, with the loss of freedom and innocence, although this assessment is seldom made explicit. Stories set in the Stone Age accordingly serve as a foil for the apocalyptic fantasies about the fall of the British Empire and the end of civilisation, and even the end of humankind, written in the same period.[4]

Scientific texts about human origins display a narrative structure; Misia Landau distinguishes four main events constituting the story of the transformation from primitive ancestor to human being: terrestriality, bipedalism, encephalisation and civilisation.[5] Whereas related genres, such as science fiction, depart considerably from the scientific theories which serve as their starting point, palaeolithic narratives, at least at first sight, stick closely to the blueprints offered by palaeoanthropology.[6] It is therefore not surprising that the narrative patterns in scientific texts analysed by Landau can also be found in their literary counterparts, with one modification: fictional Stone Age stories focus on the most 'exciting' part, the transition to a civilised stage in the late palaeolithic period.

Three different 'foundation stories', describing how the proto-human horde became a human community, can be distinguished: the first tells how civilisation emerged in the course of fighting against external enemies; this is the quintessential 'survival of the fittest' narrative in which

Neanderthal men appear as the less fit – because more dull-witted and animal-like – competitors of early *Homo sapiens*. The second foundation story describes the internal strife, the struggle of the most gifted individuals for leadership. Physical strength as a basis for leadership is replaced, at least in part, by intelligence. The 'first human' leads his group through a succession of inventions and discoveries – better tools, better hunting methods and dwelling places – towards civilisation. At the centre of this story are two interrelated movements: on the one hand, the beginnings of technology – man the tool-maker – and, on the other hand, the beginnings of political organisation, i.e. of structured, coherent communities instead of hordes. In the third instance, the introduction of law, of rules governing the life of the community, including the incest taboo,[7] is depicted. This is the only story in which women are allowed to play a more active role than that of admiring spectator.[8]

These three stories can be imagined as a sequence, but their order can be reversed, and narratives can focus on only one of these aspects. In particular, the encounter with Neanderthal man has a prominent place in fictional re-imaginations of human pre-history. Since the discovery of the first fossils in the Neanderthal valley, these large-brained hominids exercised a particular fascination, albeit often of a negative kind. In the debates about human ancestry at the beginning of the twentieth century, which culminated in the craze about the Piltdown forgery, Neanderthal man was installed as a brutish Other, clearly distinct from the clever, agile, aesthetically pleasing early *Homo sapiens*. In particular, the reconstruction by Marcellin Boule in 1908–12, based on a complete skeleton found in La Chapelle-aux-Saints, resulted not only in the final 'expulsion' of Neanderthals from the human ancestral line,[9] but provided the cultural imaginary with a picture of these hominids that persists to the present day:[10]

> [Boule] described the Chapelle-aux-Saints individual as brutish in facial appearance, as having a short, forward-slung neck and a slouching, stooped, knees-bent posture. Moreover, although the individual's brain was at least as large as modern human brains, as is the case with all Neanderthals, Boule concluded that it was poorly developed in those areas which give *Homo sapiens* its great intellectual preeminence. It was indeed the classic caricature of the slow-witted caveman.[11]

H.G. Wells is clearly influenced by this image of Neanderthal man in his depiction of the first encounter between these dull, brutish hominids

and the true ancestors of man. In his short story 'The Grisly Folk' (1921), an essayistic narrative with long expository passages about the latest developments in palaeontology, he combines the 'reality effect' of scientific writing with the dramatisation possible in fiction. A tale of struggle and extinction is told from the 'true human' perspective. Wells begins with a meditation on the difficulties of Zadig's method[12] practiced in palaeoanthropology:

> 'Can these bones live?'
>
> Could anything be more dead, more mute and inexpressive to the inexpert eye than the ochreous fragments of bone and the fractured lumps of flint that constitute the first traces of something human in the world? We see them in the museum cases, sorted out in accordance with principles we do not understand, labelled with strange names. Chellean, Mousterian, Solutrian and the like, taken mostly from the places Chelles, La Moustier, Solutre, and so forth where the first specimens were found. Most of us stare through the glass at them, wonder vaguely for a moment at that half-savage, half-animal past of our race, and pass on. 'Primitive man,' we say. 'Flint implements. The mammoth used to chase him.' Few of us realise yet how much the subtle indefatigable cross-examination of the scientific worker has been extracting from the evidence of these rusty and obstinate witnesses during the last few years.[13]

The experts have succeeded in making the bones speak. This introduction is important, because it conveys an aura of facticity to the ensuing fantasy about the decisive 'battle of evolution' that is supposed to have taken place at the end of the last ice age. But at the same time, it is the very opacity, the fragmentariness of the evidence, that opens up the space for a literary re-imagination of the events that happened 'before history': the few fossils found leave us 'the liberty to wonder' (GF 679).

Wells opposes the 'ancestor-less' first men, always already human, to the 'others' who are made to carry the whole burden of an animal heredity: 'True men appeared in Europe then, and we do not know whence they came. These other tool-using, fire-making animals, the things that were like men and yet were not men, passed away before the faces of the true men' (GF 678). These 'things' are the Mousterian or Neanderthal men, whom Wells acknowledges to be in many points less ape-like than *Homo sapiens*, but who are nevertheless more closely connected with hairy palaeolithical mammals than with 'true men'. The

mark of the Neanderthal is precisely his lack of humanity, 'the want of any close relationship between this ugly, strong, ungainly, manlike animal and mankind' (GF 680). His bent posture, a classical Neanderthal difference marker based on Boule's erroneous reconstruction of the La Chapelle-aux-Saints skeleton, distinguishes him from erect man, with all the symbolic implications – man's intellectual capacity, his 'farsightedness', even the religious propensities inherent in the ability to look up, to gaze at the stars, that the stooping Neanderthals, the creeping men, are lacking: 'Hairy or grisly, with a big face like a mask, great brow ridges and no forehead, clutching an enormous flint, and running like a baboon with his head forward and not, like a man, with his head up, he must have been a fearsome creature for our forefathers to come upon' (GF 680). The unbridgeable opposition between us and them is made very clear.

Wells elaborates further the contrast between humans and Neanderthals: the latter are not only pre-human, they are pre-social, pre-cultural, and presumably pre-lingual. They are marked as incommensurably Other in the usual way. Cannibalism, the lack of language and the absence of familial organisation – including the incest taboo – connect them to animals: 'A male may have gone with a female or so; perhaps they parted in the winter and came together in the summer; when his sons grew big enough to annoy him, the grisly man killed them or drove them off. If he killed them he may have eaten them' (GF 681). At best, then, the Neanderthals can boast what Friedrich Engels has called a *Paarungsehe*, a transitory bonding of man and woman for the purposes of sexual satisfaction and procreation. True men, by contrast, emerge in European prehistory fully formed, able to make better tools, to draw and carve, and to speak: 'They were already more social than the Neanderthaler; they had laws and self-restraints; their minds had travelled a long way along that path of adaptation and self-suppression which has led to the intricate mind of man to-day with its concealed wishes, its confusions, and laughter and the fantasies and reveries and dreams' (GF 681). In addition, the ideal of the monogamous bourgeois family is projected onto these first humans.

Engels was one of the few writers to view the introduction of the monogamous family critically, although it marks human entry into civilisation:

> [The monogamous family] develops out of the pairing family […] in the transitional period between the upper and middle stages of barbarism; its decisive victory is one of the signs that civilization is

> beginning. It is based on the supremacy of the man, the express purpose being to produce children of undisputed paternity; such paternity is demanded because these children are later to come into their father's property as his natural heirs. It is distinguished from pairing marriage by the much greater strength of the marriage tie, which can no longer be dissolved at either partner's wish. As a rule, it is now only the man who can dissolve it and put away his wife.[14]

In Engels's materialist analysis, monogamous marriage is necessitated by the 'invention' of private property; it entails, not only the subjection of women, but the introduction of social inequality and oppression. While Engels differs in his judgement of this process from other contemporary writers, the picture he paints of primitive societies does not differ radically from other palaeoanthropological speculations, including fictional recreations of the Stone Age. But for Wells, Waterloo and others, the projections of modern 'family values' onto the Stone Age are cause for celebration: they depict proto-capitalism as pastoral.[15]

Because the true ancestors of man have no origin, humans have always already crossed the boundary between animality and humanity. Neanderthal man, by contrast, functions as a figure of difference, rendering possible the purification of human genealogy from the taint of apehood. While the first humans 'were our kind', prefiguring 'our' moral struggles and aspirations, 'the grisly folk we cannot begin to understand. We cannot conceive in our different minds the strange ideas that chased one another through those queerly shaped brains. As well might we try to dream and feel as a gorilla dreams and feels' (GF 682). The shock of encountering the missing link as the twisted reflection of man's image has, according to Wells, already been enacted on the prehistoric stage. He depicts a group of humans who, pushed further north by population pressure, penetrate into the territory hitherto inhabited only by Neanderthals. The first encounter is a scene of mutual fear and loathing: '"Ugh!" said one [of the true men] abruptly and pointed. "Ugh!" cried his brother' (GF 648). Admittedly, the level of articulation of the first humans does not appear to have been terribly high – but effective:

> The eyes of the whole tribe swung round to the pointing finger.
>
> The group became one rigid stare.
>
> Every soul of them stood still, astonishment had turned them into a tense group of statuettes.
>
> Far away down the slope with his body in profile and his head turned towards them, frozen by an equal amazement, stood a

> hunched grey figure, bigger but shorter than a man. He had been creeping up behind a fold in the ground to peer at the ponies, and suddenly he had turned his eyes and seen them. His head projected like a baboon's. In his hand he carried what seemed to the menfolk a great rock. (GF 684–5)

This encounter is of course reminiscent of all the failed anagnorisis scenes of imperial fiction, the (mis)recognitions of the missing link that are the prelude to its extermination. Only the 'equal amazement' felt by the Neanderthal man hints at the possibility that 'otherness' is relative, that the human intruders appear as horrible and scary to him as he to them. The otherness of the Neanderthals, and in particular their cannibalistic raids on the band of humans – 'The Neanderthalers thought the little children of men fair game and pleasant eating' (GF 690) – cover the fact that, according to the set-up of the story, man's ancestors are the invaders in 'England', that the Neanderthals were first to occupy the disputed territory. Humans become a real community through the danger and the necessity to organise their defence against the raiders. The expulsion and, finally, extinction of the Neanderthals is the founding act of human history, and it is presented not only as inevitable, but as justified.

* * *

Stanley Waterloo's dramatisation of palaeohistory in *The Story of Ab* (1903) makes use of a pattern we are already familiar with from the Tarzan novels: the condensation of phylogeny in ontogeny. Human enculturation is described, not as a long, slow process lasting many generations, but as a series of discoveries and inventions made by a single individual. The time of action is the end of the Wurm glacialization, the late Palaeolithic age – in fact, the novel enacts the transition to the Neolithic, marked by the replacement of rough flint implements by finer, smoothly worked tools. In Waterloo's novel, Palaeolithic humans have already dissociated themselves from the animal world: 'Not that the great beasts did not prey upon man, but then, as now, the man to the great beasts was something of a terror, and man, weak as he was, knew himself and recognized himself as the head of all creation.'[16]

The eponymous hero is characterised by his superior intelligence and enterprising spirit, qualities that enable him to ascend several rungs on the evolutionary or, by then, cultural ladder. For example, Ab, with the help of his friend Oak, domesticates the first animals by raising two

wolf cubs, the ancestors of dogs (SA 98). Out of the boyish games he plays with Oak there emerge further contributions to human progress, in particular new hunting technology: the invention of bow and arrow and the use of pits for big-game hunting. But Ab furthers the advance of his community in more decisive ways: he 'invents' abstract thought and he unites the scattered families into a tightly-knit clan. This double cultural revolution is the indirect result of a crime.

Ab and Oak both fall in love with the same woman, Lightfoot. This rivalry results in a fight, and Ab sinks his stone axe 'deeply into the skull of Oak' (SA 204), the friend who had only shortly before saved his life – a secularised version of the story of Cain and Abel. Maddened by grief, Ab wanders aimlessly across the country, until he reaches a valley that is enclosed, and therefore protected, by volcanic fires. In the course of his wanderings, he achieves a new level of feeling and thinking: 'Ab, after exerting his strength to the utmost for days, had not eaten of flesh, and the strong influences to which he was subjected were exerted upon a man still, practically, fasting. For a time, the rude and earth-born child of the cave was lifted into a region of comparative sentiment and imagination' (SA 223). From his voluntary exile, Ab returns a changed man, a political and spiritual leader of his people. He marries Lightfoot and proposes the removal of several families who, till then, had lived in widely dispersed caves, into the safer Fire Valley. The development sketched by Waterloo is thus precisely the opposite of Engels's model: Instead of a division of the primeval tribe into smaller units by the introduction of monogamy and private property, in *The Story of Ab* the independent nuclear families are joined into a larger whole which is positioned somewhere between a private and a communal economic structure.

The removal to Fire Valley creates the pre-conditions for further progress: 'It was humanizing for the children, this association of such a number together […]. There came more of an average of intelligence among them, thus associated' (SA 287). In this larger social structure a distinct culture is forged. Humanity moves a large step forward, from the Palaeolithic to the Neolithic age, as the clan's toolmaker Mok simply sits down, in the protected space of the community, and invents a new technology for grinding and polishing stones:

> From this oddly formed community came a difference in certain ways of doing certain things, which changed man's status, which made a revolution second only to that made by the bow and for which even men of thought have not accounted as they should have

> done, with the illustration before them in our own times of what has followed so swiftly the use of steam and, later, of electricity. [...] The Paleolithic age changed as suddenly into the Neolithic as the age of horse power changed into that of steam and electricity, allowance being always made for the slower transmission of a new intelligence in the days when men lived alone and when a hundred years in the diffusion of knowledge was as a year to-day. (SA 287–8)

Authorial interpolations such as this one show that the object of the novel is not only to re-imagine the 'childhood days' of humankind, but to negotiate models of social interaction that could be of value for fin-de-siècle society, seen as well as a period of accelerated social and technological change. However, the Stone Age was decisively 'undecadent': references to healthy mothers nursing their own children (SA 14), palaeolithic men's keen senses (SA 20) and the constant dangers that kept man's ancestors on their toes serve as a counterweight to the advocacy of progress as an increase in safety and comfort. The anxiety of degeneration pervades, in negation, even this fantasy of primitive life. The struggle for survival is not only the force behind progress; it also prevents the slackening of powers announcing the downward sloping of the evolutionary curve.

Historical progress is not entirely a matter of peaceful development. Ab and his people are attacked by a rival tribe who plan to invade the Fire Valley. An evolutionary battle ensues that establishes the parameters for the further settlement of Europe, whose reverberations are felt even to the present day. Although the full savagery of these human ancestors comes to the fore in battle – 'Ab [...] was a creature as hungry for blood as any beast of all the forest, and his followers were scarce less terrible. [...] The fight became a massacre' (SA 341) – in the end, the more advanced civilisation wins *because* of its greater technological and social sophistication. In contradistinction to similar conflicts, for instance the battle between Indians and ape-men in *The Lost World*, Ab's people do not proceed to annihilate the vanquished opponents; instead, the survivors are incorporated into the Fire Valley community.

The model proposed in *The Story of Ab* is thus integrative, setting the tone, as the narrator explains in a sweeping historical overview that connects the prehistoric events with contemporary Europe, for coming migrations: in later ages, these primeval people will mingle with the invading Aryans, 'a blending good for each of the two forces' (SA 349), forming the racial basis for later European peoples. The concept of a

struggle for survival is thus modified by the idea of hybridization; the result of these interdependent processes is the white super-race:

> Strong was primitive man; adroit, patient and faithful was primitive woman; he, the strongest, she, the fairest and cleverest of the time, could protect their offspring, breed and care for great children of similar powers and so insure a lasting race. Thus has the good blue blood come down. This is not romance, this is not fancy; this is but faithful history. (SA 351)

The idea of a 'superior race' and hereditary 'good blood' thus hovers over the story. Despite the repeated moments insisting on the value of peaceful cooperation, integration and even miscegenation, these processes are only endorsed as long as they happen between the right races.

The question of race is in fact an implicit subtext in representations of early humans. We already saw the racialisation of the Neanderthals in Wells's 'Grisly Folk,' i.e. their representation as not only a *different* species, but also an *inferior* race, using the well-known tropes of cannibalism, linguistic disability and physical difference. Wells raises the issue of race explicitly in a non-fictional text, his *Short History of the World* (1922). Here, he posits a notion of humankind divided from the very beginnings into races that are not only different, but of different value:

> These first real human beings we know of in Europe appear already to have belonged to one or other of at least two very distinct races. One of these races was of a very high type indeed; it was tall and big-brained. One of the women's skulls found exceeds in capacity that of the average man of today. One of the men's skeletons is over six feet in height. The physical type resembled that of the North American Indian. From the Cro-Magnon cave in which the first skeletons were found these people have been called Cro-Magnards. They were savages, but savages of a high order. The second race, the race of the Grimaldi cave remains, was distinctly negroid in its character. Its nearest living affinities are the Bushmen and the Hottentots of South Africa. It is interesting to find at the very outset of the known human story, that mankind was already racially divided into at least two main varieties; and one is tempted to such unwarrantable guesses as that the former race was probably brownish rather than black and that it came from the East or North, and that the latter was blackish rather than brown and came from the equatorial south.[17]

Wells does not pursue the implications, but his speculations suggest that humanity was always divided into a superior, white (or 'brownish'), northern and an inferior, black, southern race. Wells thus prolongs the racial mapping of the world into the past. Simultaneously he offers a historical validation of the exclusion of 'Hottentots' and the like from history, their assignation into anachronistic space. Texts like *A Short History of the World* and *The Story of Ab* construe the white, northern populations of prehistoric Europe as the true, and only, agents of history. With their suggestion of inevitable progress, and modern man as its goal, such palaeoanthropological narratives appear to confirm man's special status and thus to counteract the Darwinian challenge. However, the fictional reconstruction of the beginning implies the notion of an ending. The complementary genre consists of novels about the future, imagining in one way or another the decline and fall of humankind.

Improving the race

If, in the texts discussed above, early European men are presented as a 'super-race' in comparison to Neanderthal men, in science fiction modern humans themselves appear as missing links, mere stepping-stones to the more perfect beings yet to come. The nineteenth-century fear about degeneration was accompanied by the seemingly antithetical but in fact complementary vision of human perfectability. In the wake of Francis Galton's theses on eugenics, it was deemed possible to transform the undirected process of natural selection into a purposeful programme of improvement.[18] In an early article ('The Splendid Race,' 1908), Olaf Stapledon, later to become one of Britain's leading science fiction writers, celebrates the malleability of the human species in the rhetoric – applied by Huxley, Nietzsche and Freud to Darwin's theory – of a Columbian discovery of new continents:

> To the ancient the human type was a rock, created fixed for evermore. To the man of the last century it was a cloud, ever changing but unalterable. To us it must be a virgin continent, to be cultivated and civilised. Darwin showed that man is the result of evolution. Others have shown that he may direct his evolution. Hitherto we have sought progress with social and political contrivances; but soon we shall bring to bear what may be a far more potent method. Mankind is like a child that has been patiently gathering apples as they fall, when suddenly he has the glorious idea of climbing the tree. Hitherto he has been stinted, but now there opens a vision of plenty to be realised by pluck and skill. For mankind the apples are health and strength, intellect and virtue.[19]

As the trope of the virgin continent makes clear, eugenics is the internal colonisation of the social body by scientific means. The 'savage' lower-class populace, up to this point breeding chaotically and without control, will be transformed into a civilised, *designed* organism, eschewing sickness and crime, uniting 'health and strength, intellect and virtue'.

With the introduction of directed selection not only the upsetting messiness of evolution is contained, but also the danger of degeneration, linked by late-nineteenth-century theorists like Lankaster and Nordau to the modern metropolitan lifestyle. Just as, in the Sherlock Holmes story about 'The Creeping Man', Professor Presbury's physical regression is connected to the worry about the moral degeneration of society, Stapledon maintains that the principal issues of eugenics are not only concerned with the physical health of the populace, but with the improvement of morality. This raises the question of the primacy of biology or education, nature or culture. Although by the turn of the century, the Lamarckian concept of the hereditary transmission of acquired characteristics had by and large been dismissed, the relation between nature and nurture was still hotly debated. In addition, the interaction between heredity and upbringing on the one hand, and the individual body and the body politic on the other hand, constituted the precondition for the efficacy of any eugenics programme:

> If the nature, far more than the nurture, of the parent determines the character of the child, the unwholesomeness of these days may not seriously affect our descendants. But it is allowed by all that a bad habit, or evil surroundings, through weakening the system, may cause the offspring to be stunted. Whatever be the final result of this controversy, much can be done for the improvement of the race. It seems clear that physical, mental, and moral characters are governed by the same broad laws of inheritance. In time it may be as possible to breed good men as it is now possible to breed fast horses. This is the goal at which we should aim. Meanwhile we may improve the standard of mankind by wisely restricting undesirable marriages. Thus we may eradicate not only the liability to special diseases, insanity, and crime, but also general weakness and general incompetence.[20]

Whereas Nietzsche's *Übermensch* is characterised by the ascendency of will over conventional moral restrictions, Stapledon aims at intellectual *and* moral improvement, optimistically believing 'that after much labour and many catastrophes in time there will arise a splendid race

of men, far wiser than we can hope to be, and far greater hearted'.[21] In Stapledon's advocacy of eugenics – as in the concurring views of reform-minded intellectuals, such as the Fabians Beatrice and Sidney Webb, George Bernard Shaw and H.G. Wells – a genuine concern for the welfare of human beings from all classes is linked to the notion of a regulative biopolitics, i.e. the total control of individual sexuality. The violence and oppression inherent in the 'restriction of undesirable marriages' appear to be simply invisible to the early followers of Galton.[22]

For the good of the species, liberal principles are abandoned in the most intimate area, in the choice of sexual partners. Love or class interest is to be replaced by scientific principles of sexual selection, so that health and certain moral qualities are bred in the manner of a male bird's 'gaudy colourings and various ornaments, his power of song, and other such characters' (DM 215). According to Darwin, sexual selection 'depends on the advantage which certain individuals have over the others of the same sex and species solely in respect of reproduction' (DM 216). This advantage is not confined to mere strength or speed, but includes 'beauty' – sexual selection is predicated on the 'powers of discrimination and taste on the part of the female' (DM 219). The female bird, for example, does not simply choose the strongest partner, but the one who promises to give her the greatest pleasure by his ornamental plumage or the beauty of his song – at best an indirect advantage in the business of reproduction.

In other words, in nature the mating process is run on the principles of what Foucault has called the 'deployment (*dispositif*) of sexuality', concerned primarily with the compatibility of individual bodies. In human societies, sexual relations are regulated by the 'deployment of alliance', 'a system of marriage, of fixation and development of kinship ties, of transmission of names and possessions'.[23] As Foucault has suggested, from the eighteenth century onward the deployment of alliance was superseded by the deployment of sexuality: the goal of biopolitical strategies is no longer simply to maintain the 'homeostasis of the social body'[24] – to prevent change – but to implant sexuality as a technology of power. Famously, in Foucault's definition power is not based on restriction and suppression, but on the proliferation and intensification of discourses. In this sense, the role of the modern, nuclear family is to anchor sexuality and thus to connect the two biopolitical systems:

> [The family] ensures the production of a sexuality that is not homogeneous with the privileges of alliance, while making it possible for the systems of alliance to be imbued with a new tactic of power

> which they would otherwise be impervious to. The family is the interchange of sexuality and alliance: it conveys the law and the juridical dimension in the deployment of sexuality; and it conveys the economy of pleasure and the intensity of sensations in the regime of alliance.[25]

Eugenic discourse can be read as a conjunction of the two forms of organising marriage and the family, or rather, the translation of the deployment of alliance into biological and sexual terms. Under the deployment of alliance, name outbids health: the imbecile, sickly, or aged heir can be married to a lovely young bride. The imperative of health governing eugenics would prevent such physical misalliances in the interest of the whole nation, if not the whole species. Galton in fact suggests replacing the aristocracy of name by an aristocracy of health and talent: family records should be kept on the history of disease, alcoholism and deviancy, and consulted before marriage. The alliances between families would thus lose nothing of their importance, but they would now be grounded in genealogies of vitality instead of nobility: for Galton, the ultimate goal of biopolitics is the reproduction of 'genius'. Through this marriage policy, the human species can determine its future.[26]

In the end, eugenics is an attempt to gain control over evolution itself. What Darwin has introduced into human history is a fundamental instability. The development of mankind, hitherto continually leading 'up', can any time tilt in the opposite direction. To contain this contingency is the ultimate aim of eugenic discourse. Under the conditions of modernity, life can become too strenuous, the air of the big cities literally too thin for survival. Consequently, Galton strives to convert the productive force of evolution into a conservative power, its spontaneous, polymorphous modifications harnessed – and reduced – to a system of checks and balances:

> When the severity of the struggle for existence is not too great for the powers of the race, its action is healthy and conservative, otherwise it is deadly, just as we may see exemplified in the scanty, wretched vegetation that leads a precarious existence near the summer snow line of the Alps, and disappears altogether a little higher up. We want as much backbone as we can get, to bear the racket to which we are henceforth to be exposed, and as good brains as possible to contrive machinery, for modern life to work more smoothly than at present. We can, in some degree, raise the nature of man to a level with the new conditions imposed upon his existence, and we can also, in

> some degree, modify the conditions to suit his nature. It is clearly right that both these powers should be exerted, with the view of bringing his nature and the conditions of his existence into as close harmony as possible. (HG 345–6)

A *controlled* struggle for existence prevents man from sliding back on the evolutionary ladder: it helps to 'weed out' the weak and gives 'backbone' to the strong. The notion that man can in a large part control the forces of nature, and shape his own nature, already has a flavour of the totalitarian *esprit de système* of the twentieth century. Galton formulates the basis for political systems like Fascism and Stalinism, as well as the fictional representation of super-races in their well-ordered super-societies: total control over inner and outer nature. The scepticism concerning technology visible in contemporary dystopias such as Samuel Butler's *Erewhon* is absent here: technological progress can be used to achieve that harmony between nature and culture that could bring evolution to a stop, provided that man's inner nature, his sexual desires, can be controlled.

Self-control is an important feature in Galton's programme: 'A civilized man must bear and forbear' (HG 348); under modern conditions, immediate gratification has to be postponed or given up for the sake of the future.[27] This restraint of the passions is the distinctive mark of the 'fittest', in contrast to the mob or the savage: 'This is the most trying of the new conditions imposed on man by civilization, and the one that makes it hopeless for any but exceptional natures among savages, to live under them' (HG 348). But precisely because only the elect few are able to exercise self-control and to confine themselves to suitable sexual partners, restrictive measures become necessary.

The totalitarian, and potentially deadly, aspect of eugenics is brought to the fore in some later publications that are no longer restricted by humanitarian concerns. A striking example is Charles Wicksteed Armstrong's *The Survival of the Unfittest*, a diatribe that does not fall far short of Nazi *Untermensch* ideology. According to Armstrong, eugenics raises man into 'Nature's partner', capable 'to co-operate with Nature in furthering his own evolutionary progress'.[28] The goal is the preservation of 'the finest human stock in the world' (SU 9), the English, who are however beleaguered by the enemy within, the 'defectives [who] breed and multiply much more rapidly than normal people' (SU 19). The language of cattle breeding is applied to human society:

> Eugenic reform consists in diminishing the progeny of the stock which is below par, and which under existing conditions, is threatening to

> swamp all else, and, secondly, in increasing that of the more efficient strata of society, in order that the coming generations may be better and happier than ourselves instead of more and more miserable and degenerate. (SU 75)

The first measure to be taken to prevent the latter possibility is the classification of the entire population into classes from A1 to C3; on this 'scientific' foundation, definite action becomes possible: 'To diminish the dangerous fertility of the unfit there are three methods: the lethal chamber, segregation and sterilization' (SU 75). Sterilisation is Armstrong's method of preference, but he does not exclude any of the others. Clearly, the final aim of eugenics – at least in its most radical application – is not only to 'breed good men' just as fast horses can be bred, to take up Stapledon's formulation, but to kill off the lame ones. Armstrong's programme of improving 'the stock' could be dismissed as the delusional babbling of a crank, if all three of his methods to excise the unfit had not been put into practice within the next few decades.[29]

Giorgio Agamben asks the provocative question as to why Hitler resolved to promote his euthanasia programme of 1940/41 under the 'unfavourable circumstances' of a strained wartime economy and public resistance. The killing of old people in particular – the oldest victim killed at Grafeneck, one of the main centres of the campaign, was ninety-three – is, from a strictly eugenic point of view, not 'necessary': 'what is important is obviously not the elimination of the phenotype but only the elimination of the genetic set'.[30] This excess can only be explained in terms of the absolute 'care of life' as the radical biopolitics of the nation.[31] This irrational persistence, Agamben argues, is a symptom of a certain historical constellation of which the Nazis were the clearest embodiment:

> The only explanation left is that the program, in the guise of a solution to a humanitarian problem, was an exercise of the sovereign power to decide on bare life in the horizon of the new biopolitical vocation of the National Socialist state. The concept of 'life unworthy of being lived' is clearly not an ethical one, which would involve the expectations and legitimate desires of the individual. It is, rather, a political concept in which what is at issue is the extreme metamorphosis of sacred life – which may be killed but not sacrificed – on which sovereign power is founded. If euthanasia lends itself to this exchange, it is because in euthanasia one man finds himself in the position of

> having to separate *zoē* and *bios* in another man, and to isolate in him something like a bare life that may be killed. From the perspective of modern biopolitics, however, euthanasia is situated at the intersection of the sovereign decision on life that may be killed and the assumption of the care of the nation's biological body. Euthanasia signals the point at which biopolitics necessarily turn into thanatopolitics.[32]

In this respect, Nazi biopolitics are, according to Agamben, not exceptional but only the most radical: at the time of the First World War, every 'nation-state becomes greatly concerned with natural life, discriminating within it between a so-to-speak authentic life and a life lacking every political value'.[33] On this ability to decide on the value or nonvalue of life hinges modern sovereignty; the Nazi extermination and euthanasia policies are only comprehensible in this context, and the concentration camp becomes the paradigm of modern biopolitics/thanatopolitics: 'Life – which, with the declaration of rights, had as such been invested with the principle of sovereignty – now itself becomes the place of a sovereign decision. The Führer represents precisely life itself insofar as it is he who decides on life's very biopolitical consistency.'[34]

* * *

The Nazi practice of exterminating 'unworthy life' literally as if it were vermin is an extreme vanishing point of the eugenic discourse of the late nineteenth century. Literary texts take up one particular offshoot from this discursive field: the idea of the super-race. The notion of a perfected human species is enacted in texts as diverse as George Bernard Shaw's drama *Back to Methusalah* (1921), J. Lionel Tayler's novel *The Last of My Race* (1924) and Olaf Stapledon's *Last and First Men* (1930). As in other fictions after Darwin, the ideas debated in scientific publications are here, on the one hand, pushed to their most radical realisations, and on the other hand treated with a great deal of attention to their aporias and possible pitfalls. In these texts, contemporary humans are confronted with their descendants, citizens of an advanced society of the future who bear little resemblance to the half-animal, irrational inhabitants of the twentieth century. Although these future humans (or post-humans) are also physically superior, their main distinction lies in their enormous mental development: they have, in fact, succeeded in overcoming the animal portion of man, his passions and vices.

The utopian tradition offers a template for the representation of superior societies or species. Whether More's Utopians or Swift's Houyhnhnms,

they are usually marked by a chilly inhumanity – conquering the passions entails a lack of compassion for lesser humans. The very perfection of these alternative societies gives them an oppressive taste. Not only vices, but also many pleasures are banned as soon as man finally learns to control his bodily functions and drives. This repression of the body and the concomitant growth of intellect are expressed in the post-Darwinian super-race novels by capacities such as telepathy, but also by the strict vegetarianism apparently prevalent in the future – human carnivorism is the mark of the beast. From the point of view of the *homme sensuel* of the present, the societies of the future are therefore dystopian rather than eutopian.

In addition, in temporalised science fictions – as distinct from utopias in which the perfect societies are simultaneous but elsewhere – the super-races are contemporary man's descendants. This puts their Victorian, Edwardian and Georgian forebears in an awkward position: instead of being the acme of evolution, they represent a passing imperfect stage, they are missing links to the flawless post-humans. As one of Grant Allen's titles suggests, they are simply the 'British barbarians', savages studied by an ethnographer come for that purpose from the twenty-fifth century.[35] Or, if the texts are put in the frame of eugenic discourse, the inhabitants of the nineteenth century are 'feeble-bodied' and 'feeble-minded,' and therefore expendable.

One of the earliest examples of a super-race novel, Edward Bulwer-Lytton's *The Coming Race*, published only one year after Darwin's *The Descent of Man* (whose notion of sexual selection is satirised by Bulwer-Lytton), already deploys the full ambivalence of perfect humanity including the eugenic urge for purity which constitutes the dark underside of the desire for human perfection. The narrator, a wealthy American, stumbles upon a subterranean, highly developed civilisation. Once again, we come across the topos of the lost world; but in this case, the isolated population has not been preserved in a primeval state like Conan Doyle's ape-men, but rather has overtaken human civilisation by thousands of years. Not only are the Vril-ya, as they call themselves, technically much more advanced, they are also mentally and physically vastly superior to the narrator. This advantage manifests itself in an *inhuman* calm: 'it seemed to me that in this very calm and benignity consisted the secret of the dread which the countenances inspired'.[36] The faces unlined by 'care and sorrow, and passion and sin' remind the narrator of 'the faces of sculptured gods', or 'the peaceful brows of the dead' (CR 10). Their perfection, inaccessible to ordinary human beings, appears as a state of death.

Conversely, their feeble and weak-minded visitor appears to the Vril-ya as primitive and yet unlike their barbarous neighbours, and therefore uncannily similar to themselves:

> 'But what part of the world do you come from,' asked my host, 'that we should appear so strange to you, and you to us? I have seen individual specimens of nearly all the races differing from our own, except the primeval savages who dwell in the most desolate and remote recesses of uncultivated nature, unacquainted with other light than that they obtain from volcanic fires, and contented to grope their way in the dark, as do many creeping, crawling, and even flying things. But certainly you cannot be a member of those barbarous tribes, nor on the other hand, do you seem to belong to any civilised people.'
>
> I was somewhat nettled at this last observation, and replied that I had the honour to belong to one of the most civilised nations of the earth [...]. (CR 18)

The narrator's claim to civilisation is not fully accepted, but he fares slightly better than Gulliver in Brobdingnag: he is not exhibited as a curiosity, but cordially received into the family of the magistrate Aph-Lin, albeit rather in the quality of a 'pet dog or monkey' (CR 77).

While the Vril-ya ponder what to do with the strange creature, he studies their society and history. As he learns from his host's daughter, Zee, an eminent philosopher – among the Vril-ya, speculative philosophy is the domain of women – their perfection is the result of an evolutionary process that, due to the severe conditions below the earth's surface, put more selective pressure on the population and therefore accelerated their development: 'since in the competition a vast number must perish, nature selects for preservation only the strongest specimens' (CR 51). Vril-ya and humans are in fact descended from a common ancestor; however, this does not diminish the threat to the weaker, still more animal branch: 'when our education shall become finally completed, we are destined to return to the upper world, and supplant all the inferior races now existing therein' (CR 51). The narrator, despite his protestations, is classified as a member of the inferior races and, indeed, as a missing link reminding the Vril-ya of their low descent:

> Again, the earlier races of the Ana [male Vril-ya] seem to have been covered with hair, and, even to a comparatively recent date, hirsute bushes deformed the very faces of our ancestors, spreading wild over

> their cheeks and chins, as similar bushes, my poor Tish, spread wild over yours. But the object of the higher races of the Ana through countless generations has been to erase all vestige of connection with hairy vertebrata, and they have gradually eliminated that debasing capillary excrement by the law of sexual selection; the Gy-ei [female Vril-ya] naturally preferring youth or the beauty of smooth faces. (CR 58)

Although the Vril-ya have no compunction about annihilating hostile savages and harmful animals – 'Carnivorous animals of your size are always destroyed, as being of dangerous and savage nature' (CR 85) – the narrator is treated well, at least initially. However, as he learns about a proposed extermination campaign against the neighbouring tribes, he cannot help identifying with these lower races whom he resembles so much: 'At these words I felt a thrill of horror, recognising much more affinity with "the savages", than I did with the Vril-ya' (CR 68). He is also forced to acknowledge that he does not have the status of a subject in Vril-ya society, but rather is an object of their scientific curiosity, similar to exotic people like the 'Hottentot Venus' Saartje Baartman or the 'pigmy' Ota Benga, exposed because of their physical 'anomalies' to the gaze of scientific observers and curious masses in zoos and freak shows. This already precarious position is dramatically destabilised as the narrator falls a victim to sexual selection.

To the utter amazement of her family, and to his own horror, Zee feels attracted to the puny, hairy family pet. It is his very weakness that constitutes his attraction for the protective instinct of the powerful maiden. But purity is the non-negotiable foundation of Vril-ya society, the boundary that cannot be crossed. While the emancipated Gy-ei are in principle free in their choice of partners, the miscegenation between a Vril-ya and a savage cannot be tolerated. The danger to racial purity will be averted by sacrificing the undesirable partner, as Aph-Lin informs his guest:

> I grieve for you, because such a marriage would be against the Aglauran, or good of the community, for the children of such a marriage would adulterate the race: they might even come into the world with the teeth of carnivorous animals; this could not be allowed: Zee, as a Gy, cannot be controlled; but you, as a Tish, can be destroyed. I advise you, then, to resist her addresses; to tell her plainly that you can never return her love. (CR 87)

The tables are turned against the citizen of 'one of the most civilised nations of the earth'. The novel thus points to the blind spot in all

eugenic programmes: the tacit assumption that oneself will always belong to the desirable part of the population. The narrator is not only, in his own estimate, 'most civilised', but also a member of the upper class. But the assumption of superiority of the white, wealthy, Western male is undermined by his being positioned as a missing link and consequently targeted as a racially substandard, expendable alien. Simultaneously, eugenic doctrine is revealed as the secret foundation, the discrete stabilising element, of the apparently perfect society of the future. The Vril-ya are not content with half-hearted measures like sterilisation. The narrator is sentenced to death and escapes by the skin of his teeth to the earth's surface. The muddled state of humanity, the ending implies, is preferable to the cold perfection and purity of the Vril-ya. In old age, he writes his recollections as a warning of the coming race, against whom, however, mankind will stand no chance: 'Only, the more I think of a people calmly developing, in regions excluded from our sight and deemed uninhabitable by our sages, powers surpassing our most disciplined modes of force, and virtues to which our life, social and political, becomes antagonistic in proportion as our civilisation advances, the more devoutly I pray that ages may yet elapse before there emerge into sunlight our inevitable destroyers' (CR 120).

* * *

H.G. Wells's scientific romances have a distinctly modern quality that distinguishes them from Bulwer-Lytton's slightly antiquated novel. However, one could imagine that *The Time Machine* (1895) is a sequel to *The Coming Race*. In both novels, a stronger subterranean species is pitted against a weaker humanity living on the surface of the earth. But Wells's narrative is projected further into the future, into a time in which both groups, the terrestrial Eloi and the subterranean Morlocks, are past their prime, declining, in their different ways, into childishness or bestiality. The future is not what the time traveller originally expected – he is ready for a reception very similar to that given to Bulwer-Lytton's protagonist:

> What might not have happened to men? What if cruelty had grown into a common passion? What if in this interval the race had lost its manliness, and had developed into something inhuman, unsympathetic, and overwhelmingly powerful? I might seem some old-world savage animal, only the more dreadful and disgusting for our common likeness – a foul creature to be incontinently slain.[37]

Judging from the monumental architecture found in the future, he assumes humanity to have become as aloof and terrible as the Vril-ya. However, the creatures he encounters are strangely at odds with the majestic sphynx at the foot of which the time machine has landed. They are clearly the descendants of man, but instead of having grown mentally and physically, they have become silly and helpless. They are 'very beautiful and graceful', indeed personifying the aesthetic ideal of decadent art: 'His flushed face reminded me of the more beautiful kind of consumptive – that hectic beauty of which we used to hear so much' (TM 18). This touch of frailty, even of disease, is bound up with the childish appearance of the 'exquisite creatures':

> And then, looking more nearly into their features, I saw some further peculiarities in their Dresden-china type of prettiness. Their hair, which was uniformly curly, came to a sharp end at the neck and cheek; there was not the faintest suggestion of it on the face, and their ears were singularly minute. The mouths were small, with bright red, rather thin lips, and the little chins ran to a point. The eyes were large and mild; and – this may seem egotism on my part – I fancied even then that there was a certain lack of the interest I might have expected in them. (TM 19)

The vacuity of their expression suggests a state of mind corresponding to their appearance, and indeed the time traveller finds to his chagrin that the men of the future are 'on the intellectual level of one of our five-year-old children' (TM 20), but without the natural curiosity of children. Their hectic beauty is the symptom of mental inertia, and the traveller receives an impression of a culture, and indeed a species, on the wane.

The description of the Eloi subtly links their culture, or lack thereof, to Nordau's diagnosis of contemporary decadence that appeared in the English translation in the same year as *The Time Machine*: 'The disposition of the times is curiously confused, a compound of feverish restlessnes and blunted discouragement […]. The prevalent feeling is that of imminent perdition and extinction.'[38] But the difference is that the Eloi are happy. In fact, they are not able to recognise their own condition, because the power of self-reflection, the Cartesian wellspring of the human, has gone. It is the observer from the outside who ascertains the Eloi's 'imminent perdition', while they remain blissfully oblivious. The time traveller traces the present state of humanity back to developments that had their

roots in his own times, the efforts for social reforms that resulted in individual security:

> It seemed to me that I had happened upon humanity upon the wane. The ruddy sunset set me thinking of the sunset of mankind. For the first time I began to realize an odd sequence of the social effort in which we are at present engaged. And yet, come to think, it is a logical consequence enough. Strength is the outcome of need; security sets a premium on feebleness. The work of ameliorating the conditions of life – the true civilizing process that makes life more and more secure – had gone steadily on to a climax. One triumph of a united humanity over Nature had followed another. Things that are now mere dreams had become projects deliberately put in hand and carried forward. And the harvest was what I saw! (TM 24)

The development of the Eloi then is precisely the opposite of that of the Vril-ya: while the latter, under the tough conditions of subterranean life, became a superior race, the Eloi degenerated into dependent children. The explanation is, that 'human intelligence and vigour' are, 'unless biological science is a mass of errors', the direct result of 'hardship and freedom: conditions under which the active, strong, and subtle survive and the weaker go to the wall, conditions that put a premium upon the loyal alliance of capable men, upon self-restraint, patience, and decision' (TM 25). The pressure of natural selection ceased to be effective, the time traveller speculates, when human civilisation achieved a state of guaranteed social welfare. The Eloi live in an artificial paradise, no longer oppressed by labour, lacking neither food nor clothing. The price is the regression to childhood and the loss of the highest attribute of mankind, reason.

But the traveller theorises before he has his data. This apparent Eden is hunted by a ghostly presence: the visitor from the past catches glimpses of 'white, ape-like creature[s]' (TM 34) prowling around at night, and carrying off the defenceless Eloi. The description of the Morlocks, when the traveller finally sets eyes on them, are reminiscent of Du Chaillu's running gorillas, but with the striking difference that Wells's apes are white: '[S]omething white ran past me. I turned with my heart in my mouth, and saw a queer little ape-like figure, its head held down in a peculiar manner, running across the sunlit space behind me' (TM 35). The mysterious predators are *not* racially marked as 'Other', they are 'white', an uncanny image of the self – indeed, they could be called,

using Nietzsche's term, 'blond beasts': 'there was flaxen hair on its head and down its back' (TM 35). This whiteness is the most horrible feature of the Morlocks: on the one hand a sickening reminder of their former 'glory', their descent from Europeans, and on the other hand the sign of their subterranean and nocturnal existence. Indeed, the Morlocks are not only white, dwarfish apes, they also evoke associations with low creatures of the earth, the softness of bats, the whiteness of maggots, the red, feeble eyes of moles. The traveller's reaction as he realises that they are not safely distant others, but, like the graceful Eloi, descendants of his own kind, is disgust, abjection in the Kristevan sense:

> It was not for some time that I could succeed in persuading myself that the thing I had seen was human. But, gradually, the truth dawned on me: that Man had not remained one species, but had differentiated into two distinct animals: that my graceful children of the Upper-world were not the sole descendants of our generation, but that this bleached, obscene, nocturnal Thing, which had flashed before me, was also heir to all ages. (TM 36)

If the Eloi are the long-term outcome of well-intentioned social reforms, the split of humankind is the result of the original sin of the time traveller's age, the exploitation of one class by the other: 'the gradual widening of the present merely temporary and social difference between the Capitalist and the Labourer, was the key to the whole position' (TM 37).

But although the ancestors of the Morlocks were indubitably subjected to hardships and dangers, and thus to natural selection, their evolution resulted in degeneration, too. The Morlocks are certainly tough, swift and independent, in contrast to the indolent Eloi; but they are degraded in a different way, by their transgression of the ultimate taboo of humanity, their cannibalism. That the Morlocks live on the flesh of the Eloi is partly justified. On the one hand, it is an act of historical revenge – 'Ages ago, thousands of generations ago, man had thrust his brother man out of the ease and the sunshine. And now that brother was coming back – changed!' (TM 45) – and on the other hand, it could be argued that the Morlocks and the Eloi are no longer one species, that the diet of the former can no longer be called cannibalism at all: they keep the Eloi like a kind of high-quality cattle, and – a perverted social contract – guarantee their life of ease in exchange for their flesh. Nevertheless, the time traveller, who perceives the two species as simultaneously different and same, reacts like any witness to the cannibal

feast: with horror. Cannibalism, eating and being eaten, is the mark of the ultimate degradation of both species.

The hope – or fear – of the time traveller of discovering an advanced civilisation in the future has proved to be in vain. He finds no 'coming race', but two degenerate species bound for extermination. It remains only to mourn humankind's particular mark of excellence, reason, that has already disappeared from the earth by the time of the childish Eloi and the brutish Morlocks. The 'great quiet' (TM 59) of the human intellect, resulting from the cessation of the struggle for survival, is enacted on a cosmic level farther into the future. The time traveller witnesses Lord Kelvin's prediction about the eclipse of the sun, and the entropic ending of the earth, come true. There are no more traces of man. The only life left on earth before it is finally devoured by 'the huge hull of the sun, red and motionless' (TM 63), is a gigantic crab – the last remnant of the teeming diversity of species.

Decaying cultures and the desire for death

The critique of civilisation in the late nineteenth century

The fear of degeneration that is played out in Wells's scientific romances on a global level, and over an extremely long period of time, is negotiated in other texts with a more limited focus: as the fear of the decline of British civilisation. The discovery of history and the idea of progress, the great transformations in the history of ideas of the nineteenth century, resulted not only in an optimistic belief in the endurance of British greatness, but also in a concomitant anxiety about the integrity and stability of the country, an anxiety that came to the fore in the 'invasion of Britain' novels of the 1880s and 1890s, and in related texts representing 'reverse colonisation' such as Stoker's *Dracula* which appeared in the same period. Stephen Arata describes the last decade of the nineteenth century as a time of political and economic tension:

> The decay of British global influence, the loss of overseas markets for British goods, the economic and political rise of Germany and the United States, the increasing unrest in British colonies and possessions, the growing domestic uneasiness over the morality of imperialism – all combined to erode Victorian confidence in the inevitability of British progress and hegemony. Late-Victorian fiction in particular is saturated with the sense that the entire nation – as a race of people, as a political and imperial force, as a social and cultural power – was in irretrievable decline.[39]

Many of these tendencies, like the rivalry with Germany and the disintegration of the Empire, continued to sap British self-confidence in the twentieth century. These political crises seem to be far removed from the twin anxieties of simianation and assimilation provoked by Darwinian evolution theory. And indeed, by the turn of the century Darwin's direct influence on the intellectual debates in Britain was conspicuously on the wane. But I will contend that a lasting effect of the Darwinian revolution was a 'biologisation' of political discourse, taking its most extreme form in the 'scientific racism' of Nazi ideology and its animal metaphors – or, as Agamben puts it, politics become biopolitics in the twentieth century.

In the diverse fall-of-the-Empire, collapse-of-civilisation and end-of-the-world novels – whatever their overt political agenda or seemingly apolitical entertainment value – written from the 1880s onwards, the threat of reverse colonisation or invasion, whether from Germany or from Mars, is posed in biological terms. What is at stake in these texts is not so much anthropological anxiety but an anxiety of anthropology, not a fear that humans might, if things go badly wrong, turn into beasts, but a belief that humans *are* beasts, driven by their innate aggression and destructiveness – that civilisation in an emphatic sense is, and always will be, antithetical to the human animal.

Concomitantly, what is negotiated in texts written during and after the First World War is the function of civilisation for and in human society. Even if biology became destiny around 1900, civilisation plays a crucial but controversial role, seen as either the superstructure which necessarily follows on from the biological basis, or as the oppressor of man's biological needs. The fictional treatment of these questions is of course inseparable from the shift in the views on culture taking place in philosophy, psychoanalysis and similar fields. It is impossible here to recapitulate the entire 'culture wars' ranging from Arnold to Freud, but I will attempt to give a sketch of the most important positions. The total eclipse of the belief in the human was not simply a consequence of technological inventions – more destructive weapons, poison gas – and the readiness to put them into practice – in the trench wars 1914–18 – but the result of an ongoing interaction between technological and political developments, and the creative acting out of these configurations in literature.

* * *

The most encompassing and most positive redefinition of 'culture' was attempted by Thomas Henry Huxley's contemporary, and in many

ways, antipode, Matthew Arnold. In his major philosophical work, *Culture and Anarchy* (1869), Arnold concurred with the widely-held view that contemporary British civilisation was itself an endangered species. But in sharp contradistinction to other thinkers, Arnold based both his diagnosis and the proposed remedy not on biological foundations, but on culture. To arrive at a more precise understanding of Arnold's meaning, it is pertinent to differentiate between the terms 'culture' and 'civilisation' which hitherto I have used more or less synonymously.

Norbert Elias defines civilisation, the more general term in use in different European countries, as a concept expressing the self-confidence, or self-consciousness, of the West, 'das Selbstbewußtsein des Abendlandes'.[40] But this encompassing term is differentiated according to national usage. Whereas in France and England, civilisation includes both the pride in one's own nation and in the progress of humanity as a whole, in Germany it denotes something external and of secondary importance – mere technological progress, for example – while a specific national identity is captured by the term *Kultur*. Elias distinguishes between civilisation and culture in two additional ways: first, civilisation is a process or the result of a process, continuously forward-moving, while culture is 'simply there' like 'flowers on a meadow',[41] relating to objects of art, books, religious or political systems that express the peculiar character of a people. Therefore, secondly, civilisation is inclusive while culture is exclusive: everyone, even a savage, can become more 'civilised' because this designates what is at least potentially common to all humankind. But no stranger can acquire the peculiar cultural identity of another group.

Although Elias aligns England with France, the interesting aspect about Matthew Arnold is his appropriation of the 'German' sense of culture as something higher, more inward and more profound than 'mere' civilisation. Culture in his view unites the aesthetic, the ethical and the social. Through a radical re-education of the individual, it offers a universal remedy for the malaise of modern times:

> There is a view in which all the love of our neighbour, the impulses towards action, help, and beneficence, the desire for removing human error, clearing human confusion, and diminishing human misery, the noble aspiration to leave the world better and happier than we found it, – motives eminently such as are called social, – come in as part of the grounds of culture, and the main and pre-eminent part. Culture is then properly described not as having its origin in curiosity, but as having its origin in the love of perfection; it

> is *a study of perfection*. It moves by the force, not merely or primarily of the scientific passion for pure knowledge, but also of the moral and social passion for doing good.[42]

The reason for the British predicament lies, according to Arnold, in the exclusive attention to material gain or physical improvement, in a loss of inwardness. The result of this materialistic individualism is anarchy. Culture will address the problem at its very roots: 'culture [...] places human perfection in an *internal* condition, in the growth and predominance of our humanity proper, as distinguished from our animality' (CA 94). Arnold envisions culture not so much as a content – although it is that as well, 'the best that has been thought and known in the world' (CA 131) – but as a force which addresses man in both his intellectual and his moral capacity, his gift to reason and to feel. Culture, uniting the heritage of a 'Hebrew' and a 'Hellenic' tradition, in consequence disseminates 'sweetness and light' – goodness and knowledge. Only the unity of man as a moral and an intellectual being produces happiness, and is at the same time the only protection against anarchy. Direct political action, on the other hand, fosters anarchy and threatens the human community. Only culture will produce the sense of a greater whole, a unity transcending the individual.

* * *

The difference between Arnold's *Culture and Anarchy* and Edward Carpenter's *Civilisation. Its Cause and Cure*, written twenty years later, is symptomatic of the shift in the view on human civilisation in the last decades of the nineteenth century: far from having a healing effect, culture – now in the wider, 'French' sense of civilisation – is itself seen by Carpenter as the reason for mankind's debility: it *is* the sickness it purports to cure. Indeed, anarchy would seem to be preferable. Instead of being superior to all other creatures as a result of our civilisation, 'we are actually less capable of taking care of ourselves than the animals are'.[43] Carpenter's concern is with the health of the individual and of the body politic, both of which he sees as diseased:

> But the word disease is applicable to our social as well as to our physical condition. For as in the body disease arises from the loss of the physical unity which constitutes Health, and so takes the form of warfare or discord between the various parts, or of the abnormal development of individual organs, or the consumption of the system

> by predatory germs and growths; so in our modern life we find the unity gone which constitutes true society, and in its place warfare of classes and individuals, abnormal development of some to the detriment of others, and consumption of the organism by masses of social parasites. If the word disease is applicable anywhere, I should say it is – both in the direct and its derived sense – to the civilised societies of today. (CCC 2–3)

Carpenter's description of modern man anticipates Tarzan's view of his puny, helpless civilised brethren. Far from being the crowning achievement of evolution, the enviable ruler of the world, man presents a ridiculous, pitiable spectacle: he 'muffles himself in the cast-off furs of the beasts', 'ceases to a great extent to use his muscles, his feet become partially degenerate, his teeth wholly, his digestion so enervated that he has to cook his food and make pulps of all his victuals', in short, 'his whole system' is 'on the decline' (CCC 26–7). Civilised man is not only alienated from his own body which he has forgotten how to use, he is also unfree, oppressed by social rules on which he has, however, become dependent: 'Losing touch with the inward Man – who is his true guide – he reclines upon an external law, which must always be false' (CCC 31).

Civilisation is the cause of man's physical degeneration and social oppression. Far from suggesting the pursuit of an Arnoldian 'best self' via the routes of more knowledge and greater morality, Carpenter demands a voluntary re-barbarisation. To save himself, man has to bid farewell to the comforts of modern life and rediscover nature – both the natural man within and nature as the great challenging force:

> Thus, in order to restore the Health which he has lost, man has in the future to tend in this direction. Life indoors and in houses has to become a fraction only, instead of the principal part of existence as it is now. Garments similarly have to be simplified. How far this process may go it is not necessary to enquire. It is sufficiently obvious that our domestic life and clothing may be at once greatly reduced in complexity, and with the greatest advantage – made subsidiary instead of erected into the fetishes which they are. And everyone may feel assured that each gain in this direction is a gain in true life – whether it be the head that goes uncovered to the air of heaven, or the feet that press bare the magnetic earth, or the elementary raiment that allows thro' its meshes the light itself to reach the vital organs. The life of the open air, familiarity with the winds and

> waves, clean and pure food, the companionship of animals – the very wrestling with the great Mother for his food – all these things will tend to restore that relationship which man has so long disowned; and the consequent instreaming of energy into his system will carry him to perfections of health and radiance of being at present unsuspected. (CCC 36)

Carpenter's pastoral escapism is one of many voices around 1900 expressing a discontent with modern civilisation. After the turn of the century, these critical interventions find an outlet in experimental activism, ranging from the neo-paganism of the Cambridge circle around Rupert Brooke (directly influenced by Carpenter), the German *Körperkultur* movement advocating sports, nudism and vegetarianism, and the boy scouts movement, to the celebration of strength and virility in European fascism culminating in Leni Riefenstahl's film about the Olympic Games of 1936.

To take the boy scouts as an example, Robert Baden-Powell's assessment of the degenerate state of English boys resonates with Carpenter's anti-civilisationist despair. Baden-Powell compares the circuses of ancient Rome and modern spectacles such as professional football and surmises that the passive spectatorship and the vicarious enjoyment of feats of masculinity are in both cases the sure sign of degeneration:

> I yield to no one in enjoyment of the sight of those splendid specimens of our race, trained to perfection, and playing faultlessly; but my heart sickens at the reverse of the medal – thousands of boys and young men, pale, narrow-chested, hunched-up, miserable specimens, smoking endless cigarettes, numbers of them betting, all of them learning to be hysterical as they groan or cheer in panic unison with their neighbours – the worst sound of all being the hysterical scream of laughter that greets any little trip or fall of a player.[44]

The greatest danger of modern, metropolitan life is effeminacy: the male body is not only debilitated by its passivity, it is also hystericised. Masculine strength dissolves in the masses; instead of heroic empire-builders we get a nasty horde enjoying not so much the success as the failure of the players. The 'cure for civilisation' Baden-Powell proposes in his manual for boy scouts is basically the same as Carpenter's, or as Edgar Rice Burroughs's fictional precept: a return to the woods. Baden-Powell advocates woodcraft, tracking, discipline, hygiene, competition and games as means for the reconstruction of masculinity. Under the

guidance of the right leaders – 'Manliness can only be taught by men, and not by those who are half men, half old women' (SB 301) – it will be possible to change the course and 'turn the rising generation on the right road for good citizenship' (SB 297).

With the idea of good citizenship, the political re-enters his pastoral escapism. The recovery of health, strength and chivalric values by British boys is not a goal in itself, but serves the purpose of national and imperial defence: 'Every boy should prepare himself, by learning how to shoot and to drill, to take his share in defence of the Empire, if it should ever be attacked. If our enemies saw that we were thus prepared as a nation, they would never dare to attack, and peace would be assured' (SB 277). With that, the anti-civilisationist trajectory receives a curious twist: what Baden-Powell has to offer is not the absolute freedom of the jungle, but drill, the disciplining of the body for military purposes – in the service of peace.

* * *

For Baden-Powell, as for Kipling, Rider Haggard and Conan Doyle before him, the true arena in which humanity in general and masculinity in particular were to be tested was the Empire. If the metropolis itself appeared as an endangered place, this was mainly due to the possibility of infiltration, germ-like, by forces generated in the imperial periphery, in the manner of the Himalayan monkey serum taking hold of the professor's body in Conan Doyle's story. By contrast, now Europe itself comes into focus. The Stone Age stories by Wells and Waterloo are not only about the dawn of humankind in general. Rather, the birth of a *European* master race is at stake. At the other end of the spectrum, the end-of-the-world scenarios concern the decline and fall of Europe. Wells's time traveller does not budge from his study – he leaves Europe behind in the temporal, not the spatial dimension. It is European civilisation he finds decaying in the far-away future. And finally, although Baden-Powell is preparing his boy scouts for an imperial struggle, the battlefields on which they will actually fight will be in Flanders.

With hindsight, it is tempting to think that the First World War, which was first and foremost a European war, cast its gloom on all those writers indulging in cultural pessimism and anti-civilisationist critique in the first decade and half of the twentieth century. However, the mass slaughter of modern warfare came also as something of a surprise. The first all-European war for a century to be fought, not on the far-away Crimea, not in Afghanistan or South Africa, but in the

very heart of Europe, administered a shock to the self-definition of all European nations as civilised, however critically they may have viewed civilisation before the event. In the following, I will therefore move beyond the British perspective and focus on the way the First World War was perceived on all sides as a breach of civilisation, adding a new dimension to anthropological anxiety. Two writers who were crucially influenced by this particular war experience are Oswald Spengler and Sigmund Freud.

Mankind's collective desire for death: Spengler and Freud

Spengler's title *Der Untergang des Abendlandes* (1918; translated as *The Decline of the West*, but more literally the 'sinking' or 'setting' of the 'Orient') was programmatic. Spengler saw the downfall of Western culture not as a contingent affair, but as the necessary result of regular historical patterns. His 1200-page study aimed at nothing less than a new foundation of historiography: Spengler postulated that cultures – in a specific geographical sense: e.g. Arabic or Indian culture – were analogous to organisms and developed in invariable cycles of growth, bloom and decay. The respective sequences of a culture's life cycle correspond to that of other cultures, e.g. the mature period of classical Egypt corresponds exactly to the same (but not simultaneous) period in Chinese history. Modern Western culture is not exempt from this axiom.

In short, Spengler was in search of a general morphology of history, analogous to Goethe's morphology of plants and animals. What he considered the most revolutionary aspect of his method was its prognostic quality: once you have defined your own moment in the cycle, you can foretell with mathematical precision the further development of your own culture. And European culture in 1914 was, as Spengler saw it, well past its prime. In fact, it had completed the transition from 'culture', in the sense of the highest possible spiritual achievement – for Spengler personified by Goethe and his period – to mere 'civilisation', a completely unmetaphysical, outward-looking, materialistic stage. Civilisation is the mechanical winding-up of a culture's destiny.

For Spengler, occidental culture is already dead. The task imposed on contemporary men is to get rid of the corpse: '*Pure* Civilization, as a historical process, consists in a progressive *taking-down* of forms that have become inorganic or dead.'[45] This decomposition process may sometimes show a deceptive vitality – as, indeed, a corpse is full of life – in the form of technological inventions or gestures of expansion. The acquisitive activities of imperialism, for instance, belong to civilisation. If Goethe was the embodiment of European culture, its civilisation is

personified by the rapacity of a Cecil Rhodes. But although the Western imperial powers still seem to be the leaders of the world, in truth they have already moved beyond world history, into an unchanging state of *posthistoire*, into a purely zoological existence. What remains after the end of a culture is the struggle for animal survival: 'All that remains is the struggle for mere power, for animal advantage *per se*. Whereas previously power, even when to all appearance destitute of any inspiration, was always serving the Idea somehow or other, in the late Civilization even the most convincing illusion of an idea is only the mask for purely zoölogical strivings.'[46] The First World War, parading as a contest between democratic and authoritarian governments, was in this view a struggle over 'zoological questions of power'.

The belatedness of his times was for Spengler expressed by the barrenness of modern man. Here, he seems to resume the discourse of degeneration from the nineteenth century. But in fact, he is not concerned with individual health or social disease but with a metaphysical desire for extinction that takes hold of the whole 'organism' of a nation. The collective organism realises that its time is up, even if individuals still continue to believe that they are taking part in history. This belief results in horrible battles of extinction and a progressive depopulation of the civilised centres, until only a primitive agrarian population is left over: 'The whole pyramid of cultural man vanishes. […] At the last, only the primitive blood remains, alive, but robbed of its strongest and most promising elements.'[47] Perhaps we can imagine this post-historic, post-civilised Europe a bit like the barbarian England in Richard Jefferies's *After London* (1885), in which nature reconquers the villages and towns, and the site where London used to be has turned into an immense, fetid swamp. But unlike the late Victorian cultural pessimists like Jeffries or Carpenter, for Spengler, the notion of the downfall, of a 'rebarbarisation' of civilisation, bears no hope of a renewal, of a rise from the ruins.

* * *

Spengler was deeply influenced by Nietzsche's amoralism. Men act in certain ways, they kill or suffer, not because they are good or bad, but because the laws of history demand it of them. What the present times seemed to demand of Spengler's generation was an acceptance of their death, of their already-being-dead. A contemporary of Spengler, Freud approached the question of death from a completely different angle. To counter Spengler's morphology of history which doomed Western

civilisation, Freud proposed a binary anthropology, based on the struggle of Eros and Thanatos, which – though pessimistic – left the outcome open. In the war decade, he revised his theory of drives, giving the primordial drive toward death a prominent place. The introduction of the death drive did not only signify a major reconceptualisation of the psychic apparatus, but also a shift on the meta-psychological level of Freud's theory, a darker rethinking of his view on man. While this alteration happened, as Freud stressed, in response to the exigencies of psychoanalytic theory itself, it is undeniable that personal events (the death of his daughter Sophie) and political catastrophes (the war experience) exerted an influence.

The hope that moral as well as mental healing could be effected by psychoanalysis was proved by the Great War to be fallacious. It was the failed treatment of traumatised soldiers in particular that resulted in Freud's postulate of a death drive that is equally strong, if not stronger, than the erotic drives. If Spengler assumed a death drive on the part of the collective organism, Freud was even more radical in declaring that the individual organism, too, found a paradoxical pleasure in rehearsing its own dying:

> Freud was not simply concerned to expose a general tendency toward aggressivity and destructiveness in human beings. The thrust of Freud's idea was to conceive of a force of *self*-destructiveness, a primordial aggressivity *toward oneself*, from which aggressivity toward others is ultimately derived. To fail to see that it is one's own death that is at stake in the death drive is to miss the point entirely.[48]

Freud elaborated his theory of a libidinal economy that operates *beyond* the pleasure principle into an encompassing theory of culture in the following years, culminating in *Das Unbehagen in der Kultur* (*Civilization and its Discontents*), published in 1930, three years before Hitler's seizure of power. Elsewhere, he defines culture in an almost classical manner as the specific mark of humanity: culture is 'all those respects in which human life has raised itself above its animal status and differs from the life of beasts'.[49] However, even in the state of culture, humans cannot fail to be unhappy. For Freud, discontent is a necessary part of the *conditio humana*; life as such is 'too difficult': 'Life, as we find it, is too hard for us; it brings us too many pains, disappointments and impossible tasks.'[50]

Freud is too much of a Hobbesian to romanticise, in the manner of Edward Carpenter, the existence in nature. But he takes up Carpenter's vein of anti-civilisationist critique – 'what we call our civilization is

largely responsible for our misery, and […] we should be much happier if we gave it up and returned to primitive conditions'[51] – and moves it to a metalevel, inquiring into the causes of the pervasive discontent with the privileged state that distinguishes us from animals. He sees three historical occasions for disaffection with culture: the devaluation of sensual life by Christianity, the contact with apparently happy primitive peoples in the course of the early modern discovery voyages, and finally, the discovery of neurosis by psychoanalysis. But the invocation of the 'possibilities of happiness' in a state without repression is as spurious as the undignified pursuit of happiness in the life reform movements inspired by Carpenter. Nowhere does Freud suggest that we become happier if we, metaphorically or literally, shed our clothes – our repression constitutes our humanity.

The twofold purpose of culture, to protect man against nature and to regulate his relations with other men, is achieved only at the price of giving up the unfettered freedom of the *homme naturel*. Individual freedom, Freud maintains, is not a cultural value, but a sacrifice made to culture. Civilisation, in fact, is built on sublimation, the non-satisfaction of one's libidinal and aggressive desires. However, if man is freed from the restraint imposed by social laws, his repressed bestial nature comes to the fore – he shows himself to be a 'savage beast to whom consideration towards his own kind is something alien'.[52] The individual beast – here Freud almost waxes Nietzschean – and the controlling society thus stand locked in an eternal conflict:

> In consequence of this primary mutual hostility of human beings, civilized society is perpetually threatened with disintegration. The interest of work in common would not hold it together; instinctual passions are stronger than reasonable interests. Civilization has to use its utmost efforts in order to set limits to man's aggressive instincts and to hold the manifestations of them in check by psychical reaction-formations. Hence, therefore, the use of methods intended to incite people into identifications and aim-inhibited relationships of love, hence the restriction upon sexual life, and hence too the ideal's commandment to love one's neighbour as oneself – a commandment which is really justified by the fact that nothing else runs so strongly counter to the original nature of man. In spite of every effort, these endeavours of civilization have not so far achieved very much.[53]

The pacifying efforts of civilisation are bound to fail because of the ubiquity of non-erotic aggression and destruction. While civilisation

works in the service of Eros, forging the larger units of families, tribes and nations, the death drive undermines this labour of love. This antagonism constitutes the deep structure of all cultural processes, it is the reason behind the very existence of culture: 'It must present the struggle between Eros and Death, between the instinct of life and the instinct of destruction, as it works itself out in the human species. This struggle is what all life essentially consists of, and the evolution of civilization may therefore be simply described as the struggle for life of the human species.'[54]

The struggle for survival of the human species is not fought against other species, but primarily against itself, against other men and against the destructive beast within. Precisely the conjunction of civilisation in its most negative sense – an advanced, destructive technology – with the primitive drives, man's heritage from the primeval horde that constituted itself as a family by the murder of the father, as described in *Totem and Taboo*, makes up the present danger. Man is a kind of microcosmic anachronistic space: in his own body, modern man meets his ferocious ancestor. For the time being, Freud leaves open the question whether primitive man or his civilised counterpart are going to win. The 'question of questions' for mankind is no longer, as in Darwin's times, how to deal with the 'descent from apes'. Now it is how to reconcile the evolutionary heritage, the primitive structure of the psyche, with the destructive power given into man's hands by civilisation. Hitler's rise to power in the early 1930s increased the pessimistic slant of Freud's theory. Within less than a decade it would become evident that the conciliatory work of culture had failed.

The final wars of humankind

After the war: men into beasts

In April 1915, nine months after the beginning of the First World War, Sigmund Freud writes about the 'disappointment of war', the unexpectedness of a military conflict among civilised nations. That the 'ruling nations of white race', who had achieved such astounding results in the domination of nature and who had established 'high ethical norms' for the individual, albeit at the price of libidinal repression, should be unable to regulate their conflicts in the interest of the cultural cosmopolitanism (*Kulturweltbürgertum*) that Freud so cherished, came as a great shock. The greater the belief in such ideals, and in an international 'parnassus' and 'school of Athens' of philosophers, artists and poets, the greater must have been the sense of frustration in the face of a war that

surpassed all others in scope and cruelty. Even at that early stage, it was discernible that this war had a new quality:

> Not only is it more bloody and more destructive than any war of other days, because of the enormously increased perfection of weapons of attack and defence; it is at least as cruel, as embittered, as implacable as any that has preceded it. It disregards all the restrictions known as International Law, which in peace-time the states had bound themselves to observe; it ignores the prerogatives of the wounded and the medical service, the distinction between civil and military sections of the population, the claims of private property. It tramples in blind fury on all that comes in its way, as though there were to be no future and no peace among men after it is over. It cuts all the common bonds between the contending peoples, and threatens to leave a legacy of embitterment that will make any renewal of those bonds impossible for a long time to come.[55]

The Great War was, at least in the eyes of the contemporaries, an utter breach of civilisation, a relapse into barbarism – perhaps not unprecedented, not more cruel than, say, the Thirty Years' War, but, because of the heights mankind had meanwhile climbed to, precisely more *disappointing*. The war had already destroyed the social contract, the basis for civilised coexistence. In an extension of Hobbes's view of the state of nature, nations will be each other's wolf, and following their example, individuals will revert to beasts: 'When the community no longer raises objections, there is an end, too, to the suppression of evil passions, and men perpetrate deeds of cruelty, fraud, treachery and barbarity so incompatible with their level of civilization that one would have thought them impossible.'[56] This ethical failure will have dire consequences for Europe's citizens whose lives could once more become solitary, poor, nasty, brutish and short.

However, as Freud goes on to say, this disappointment was to be expected: it only marks the end of an illusion, the illusion that man's propensity for evil could be eradicated by the influence of culture. Man has at best an 'aptitude' for culture (*Kultureignung*); his civilised status is constituted in conflict with his libidinal and aggressive instincts. Individuals who achieve, in Arnoldian terms, a 'best self' at the expense of the 'baser' instincts, live psychologically beyond their means. The regression to barbarism is the declaration of bankruptcy of this artificial state, a return to the true human nature that was only masked by 'cultural hypocrisy' (*Kulturheuchelei*). While the ascent to the ideal

demanded by society, or the super-ego, is arduous and hardly attainable, the return to the original state is always possible: 'But the primitive stages can always be re-established; the primitive mind is, in the fullest meaning of the word, imperishable.'[57] In war, modern man finally meets his primitive ancestor.

* * *

This bleak view of human nature was taken up in numerous novels of the 1920s. Alongside realistic, partly autobiographical representations of the atrocities of war – such as Erich Maria Remarque's *Im Westen nichts Neues* (*All Quiet on the Western Front*, 1929) – there are several novels that project the war experience into the future, showing the complete destruction of Europe and the final undoing of its civilisation.

War comes without a warning. In Cicely Hamilton's novel *Theodore Savage* (1922) the eponymous hero, a civil servant with a taste for the fine arts and the refined pleasures of life, is evacuated from London in the first days of war and observes the fast deterioration of his fellow citizens into a seething mass, no longer wholly human, as if they were following Freud's textbook: 'It was after the second red night that the refugees appeared in their thousands – a horde of human rats driven out of their holes by terror, by fire and by gas.'[58] The enemy – the 'Karthanians' – ruthlessly destroys the cities in the South and employs poison gas against the civilian population, who fly in panic to the North. The situation is similar to the mass flight in Wells's *War of the Worlds* (1898), where the fugitives are also transformed from civilised individuals into an amorphous multitude:

> For the main road was a boiling stream of people, a torrent of human beings rushing northward, one pressing on another. A great bank of dust, white and luminous in the blaze of the sun, made everything within twenty feet of the ground grey and indistinct, and was perpetually renewed by the hurrying feet of a dense crowd of horses and of men and women on foot, and by the wheels of vehicles of every description.[59]

But in Wells's novel, there is still a place for individual acts of chivalry, solidarity and compassion. Although the narrative sets in with a reversal of the scientific and the colonial situation and likens humans first to infusoria under a microscope (WW 185), then to the Tasmanians who were, 'in spite of their human likeness' (WW 186), exterminated by

European immigrants, the dividing line between the human self and the animal abject is never seriously questioned. Not only because of their disgusting appearance, but also because of their vampiric propensities do the Martians appear utterly alien. In contrast to their abjection, the humanity of their terrestrial victims is reinforced, even in cases such as the curate who, in the face of the horror of watching the Martians feed on his fellow-humans, loses his reason and sinks 'to the level of an animal' (WW 284). The curate, the artilleryman and other characters who do not pass muster in the face of the alien attack still remain emphatically human. The very fact that Wells's narrator encounters so many *individual* characters who display the whole gamut of reactions, from cowardice and panic to heroic resistance and noble self-sacrifice, distinguishes them from the grub-like Martians *as human*, with all the diversity of humankind.

By contrast, the fugitives in *Theodore Savage* are not compared to an Other (the enemy does not make an appearance except as an abstract cause of destruction), but to the image of their former selves. In consequence, they are cast as their own abject. Theodore watches their transformation into a sickening mass, a collective organism beyond humanity, as they try to board the last train to safety:

> A crowd that was squalid, unreasoning and blindly selfish; intent only on flight and safety – and some of it brutally intent. There were scuffles with porters and soldiers who refused to open locked doors, angry hootings and wild swayings backward and forward as the train moved out of the station; Theodore's efforts to make his way to the station-master's office were held to be indicative of a desire to travel by the next train and he was buffeted aside without mercy. There was something in the brute mass of terror that sickened him – a suggestion already of the bestial, the instinctive, the un-human. (TS 78)

Theodore's sickening feeling on observing the dehumanised mass stems partly from his own lack of distance. Although he struggles to preserve his own humanity, he realises that he is not exempt from the process of rebarbarization, that he too is reverting to an animal stage: 'how quickly he slipped from the outlook and habits of civilized man and adopted those of the primitive, even of the animal' (TS 86). Becoming animal means, in the first place, to lose the feeling of common human solidarity, to regain the absolute selfishness imputed by Freud to natural man: 'It was not only that he was suspicious of every man, careful in approach, on the alert and ready for violence; he learned, like the animal, to be indifferent to the suffering that did not concern him' (TS 86).

The narrative again and again reiterates the rapidity with which civilisation breaks apart: 'It amazed him, looking back, to realize the swiftness with which ordered society had crumbled; laws, systems, habits of body and mind – they had gone, leaving nothing but fear and the animal need to be fed' (TS 86). Far from providing a safeguard against anarchy, cultural achievements – civility, considerateness, generosity, aesthetic sensibility – turn into handicaps in the struggle for survival. The collapse of civilisation is experienced as a recapitulation of evolution in reverse: 'Man, with bewildering rapidity, was slipping through the stages whereby, through the striving of long generations, he had raised himself from primitive barbarism and the law that he shares with the brute' (TS 88). The 'cure' for civilisation, its abolition, is enforced by necessity.

But the insistence on the rapidity of the process suggests how superficial civilisation had been. Although the dark continent of man's animal nature had been conquered in a long, hard struggle, the opposing forces, man's innate aggressive drives, were only dormant, not extinct. As soon as the opportunity arises, the human animal shakes off the fetters of culture and embraces anarchy with gusto. This diagnosis is made explicit by a dying man whom Theodore assists in what is possibly his last act of compassion before 'beast-right – the right of the strongest to live' (TS 107) takes over: 'We were not civilized – it was only our habits that were civilized; but we thought they were flesh of our flesh and bone of our bone. Underneath, the beast in us was always there – lying in wait till his time came. The beast that is ourselves, that is flesh of our flesh – clothed in habits, in rags that have been torn from us' (TS 120–1).

The survivors of war have become, in Oswald Spengler's term, mere 'zoological entities', no longer men who participate in world history. And there is no prospect that they will ever again rise to a higher stage. In contrast to Jefferies's *After London*, where mankind seems about to rally from the collapse of civilisation, ready to rediscover Arnoldian culture as a moral force, the regression to animality in *Theodore Savage* seems final: 'Now they were seeking to live as the beasts live, and not only the world material had died to them, but the world of human aspiration. ... To this they had come, these people who once were human – the beast in them had conquered the brain...' (TS 334). The end of history, the end of humanity has arrived.

* * *

In P. Anderson Graham's novel *The Collapse of Homo Sapiens* (1923), Darwin's evolution theory is picked out as one of the direct causes of the

future degradation of men into beasts. By destroying religion, Darwin unwittingly undermined the moral basis of civilisation: 'Charles Darwin probably never thought he was sapping religious belief when working at his theory of evolution. He was simply a disinterested student who seldom engaged in speculation with regard to ultimate effects.'[60] But the disinterested pursuit of knowledge, a symptom of the general lack of spirituality of modern civilisation, has dire long-term consequences. The first-person narrator is sent by a 'superior being' 200 years into the future where he has the opportunity to observe humankind in its posthistoric stage.

Again, England is transformed into a deserted wilderness: 'there were no railways. Where they had been were long narrow dells, the mounds on each side of which were overgrown with bracken, bushes, briers, thorns and other inhabitants of the wilderness. Where towns and villages had been, with their churches, halls, streets and stations, was only a wilder confusion of weed, scrub and mortar' (CHS 13). This desolate countryside is inhabited by human beings who, adapting to their primitive living conditions, have reverted to an earlier stage of development: 'Looked at more closely they were seen to be very stunted, lithe and active, but with heavy and brutish faces, jaw and mouth grown coarse and strong like those of the carnivora. Such scanty clothing as they wore consisted of skins of animals badly dressed' (CHS 14). These men of the future have reverted into cannibals, sublunary Morlocks hunting and devouring each other.

On a second visit to the future, the narrator succeeds in finding the last true men, a last post of the civilisation of the British Empire. The inhabitants struggle against the forces of a downward-bound evolution which is pushing them inexorably back to the neolithic stage. Their number is constantly diminishing, while the ferocious woodmen are proliferating. The forces of life are against civilised man. Observing some children playing, the narrator reflects on the precariousness of civilisation:

> It would have been a pretty sight, but for the association it called up. The pleasure was destroyed by the reflection that as the dog had gone back to the wolf, the garden rose to the brier, the thoroughbred to the forest pony, so man too was visibly reverting to his neolithic progenitors. Time like a tide that had been at the full and now had begun to ebb, was going backward discovering again as it receded the shore which had been covered by its advance. The tree that has taken centuries to grow can be cut down in an hour. Civilisation, which Huxley in his day described as a wall that would quickly crumble if a single breach were made, had proved a failure. (CHS 32–3)

Juxtaposed to Huxley's definition of civilisation as a precarious human construct, organic metaphors, reminiscent of Spengler's concept, predominate; like all organisms, civilisation comes to an end when its allotted time span is up. Even if the continuing regression of the surviving men appears as natural, i.e. completing an organic cycle of growth and decay, the end was triggered by a cataclysm that had external causes: a terminal war of the races. So, while the internal cause of decay lies in the sapping of the natural strength of Western civilisation by pernicious doctrines like Darwinism, the greatest part of the novel is devoted to a description of the genocidal struggle which ended in Anglo-saxon defeat. The images used are not very far removed from the Nazi imaginary of an *Endkampf* between superior and inferior races.

A crucial feature distinguishing the last men from their savage neighbours is their desire to retain a memory of the past, even if history came to a stop. They carefully preserve the few remaining historical documents, allowing their visitor to form a picture of the events that led to the catastrophic end of civilisation. One manuscript describes the war and ensuing destruction of Scotland. The war was a racial genocide, perpetrated by an enemy of colour, 'an enemy, who according to rumour, aimed at nothing less than the extermination of the white races' (CHS 166). The foreign soldiers hunt and shoot the inhabitants, including the children hiding in the woods – the survivors become the ancestors of the degenerate woodlanders – and destroy the infrastructure, the railroads and telegraph wires. This is, according to the diarist, part of a purposeful plan to bomb Britain back to the Stone Age: 'The enterprise has been planned by a master hand and carried out with an indifference to human suffering which suggests that it comes from the Far East. The aim evidently is not only the conquest, but the total annihilation of the old country' (CHS 179). The motivation for the invasion thus seems to be pure 'Eastern' malevolence and bloodthirstiness.

Another account of the invasion is the story of Sir John Scarlett. Here, the emphasis on the racial aspect of the strife is even more marked. The antagonist in the struggle for survival is a black soldier who discovers Sir John and his wife hiding in the woods. He comes to kill them but, provoked by Scarlett's contempt for the 'nigger', he decides to prove his equality with the white man in a fair fight:

> I in your estimation am a savage, not because I am stupid or ignorant – I was educated in the same college as yourself and took a higher degree, if, as I suppose, you are Sir John Scarlett – but because

> my skin is not white. Even desperation cannot quell your insolence. I could shoot you as easily and with as much pleasure as I could stamp on a wasp, but it would give me more satisfaction to knock the stuffing out of a damned Englishman. As to the gun, look, I toss it on the bank and stand between you and it. Come for it if you dare; there are only two fists in the way. (CHS 223)

The soldier's indictment of the white man's bigotry is not a 'subversive' voice in an otherwise racist narrative. What begins to look like a critical engagement with English racism is turned into a confirmation of the moral superiority of the white race. Sir John is astonished that a 'nigger' is such a 'good sport' and accepts the challenge; for a while, they fight fairly – on both sides. The match is styled as a generic contest of the races, juxtaposing the agility and speed of the black man to the controlled, level-headed fighting of his opponent. But the ostensible fairness of the soldier is disclosed as a feint, or rather, the Cambridge education that had instilled in him a sense of fairness – that quintessentially English quality – is shown to be only a thin veneer, unable to touch the deep structure of race:

> Sir John was a great wrestler, and managed to obtain a grip that would have ended the contest if the dark man had not in his desperation forgotten the ideas of good form he had picked up at Cambridge and bit viciously at the neck of his adversary, at the same time kicking with the spurred boot. Pain and disgust enraged the Englishman. With a tremendous effort he lifted his opponent off the ground, swung him round and round, then brought him to the earth with a thud. He lay motionless. (CHS 224)

Fairness belongs to the Englishman alone, fury and deceit to the black man who will always remain a savage and a beast. The crude message is clear. In a conjunction of such stereotypes with the topos of invasion, Graham's novel enacts the phantasm of racial defeat. It thus represents the reverse side of the Stone Age novels celebrating the strength of the European master race. The fear of reverse colonisation, Stephen Arata has suggested, is triggered by an unavowed sense of guilt. In texts such as Hamilton's and Graham's, the feeling of guilt over imperialism and racial oppression is projected onto the Other, the alien race destroying Western civilisation out of pure malevolence. Racist discourse is thus uncritically reproduced even at a time when the British Empire has really begun to crumble.

The different discursive formations constituting the matrix both of the Stone Age narratives and of the apocalyptic 'fall of Britain' novels – evolution and degeneration, the idea of superior and inferior races struggling over a limited 'living space' (*Lebensraum*), cultural pessimism of the Spengler variety – are taken up, and debunked, in one of the wittiest works of fiction written between the wars: Karel Čapek's *Válka s mloky* (*The War with the Newts*, 1936), the story of evolutionarily advanced giant newts who first become man's servants and then his foes. One of the great achievements of Čapek's novel, which renders it a suitable conclusion for the present study, is its linking of the local and the global: the 'grand narratives' of the late nineteenth and early twentieth century, from evolution theory and imperialism to fascism, are retold from the perspective of a small country which was simultaneously marginal and central in the political games of the 1930s – one of continental Europe's last democracies and the first victim of Hitler's expansionism. *The War with the Newts* thus constitutes, on the level of *histoire*, a pivot between fiction of the 'Darwinian era' and a new, more overtly politicised period in literary history. On the level of *discours*, Čapek's novel deconstructs, in the full sense of the word, the discourses it quotes by means of self-consciously modernist techniques of collage and montage.

The decline of humankind: *The War with the Newts*

In the Age of the Newts, men have finally, truly become the masters of nature. With the help of a gigantic workforce of intelligent, trained newts, they gain control over those parts of the planet that had hitherto escaped the human grasp: the seas. The newts build new ports, they change the coastline of whole continents, they even erect new continents in the middle of the ocean. Man's triumph is total – or so he believes. At this historical moment, the philosopher Wolf Meynert of Königsberg publishes his epochal work *Der Untergang der Menschheit* (*The Decline of Humankind*, German title in the Czech original):

> The tragedy of the human race is being played out, Wolf Meynert began. Let us not be blinded by feverish enterprise or technological prosperity; these are but the fever patches on the cheeks of an organism already marked by death. Never has mankind experienced a greater upsurge to its life than today; yet find me one person who is happy, show me one class that is content, or one nation that does not feel threatened in its existence. Amidst all the gifts of civilization, in Croesus-like wealth of spiritual and material values, we are all

> increasingly gripped by an irresistible sense of uncertainty, anxiety and malaise.[61]

With Meynert's work Karel Čapek offers a brilliant satire on Spengler's *Decline of the West*. His impersonation of the 'sage of Königsberg' is representative of Čapek's literary technique: the montage of different voices, creating a multiperspectival, decentred narrative. His chapter on Meynert is an extremely comical mimicry of the high pathos of German cultural pessimism between the wars. Yet the irreverent satire contains also a deeply serious layer, a worry on the side of the Czech writer about the 'downfall', the 'flood' that is in reality threatening his own country and Europe as a whole.

Karel Čapek, together with his brother, the artist Josef Čapek, was at the heart of the Czech modernist movement. His drama *R.U.R.* (*Rossum's Universal Robots*, 1920) in which the term 'robot' – derived from *robota*, forced labour – was used for the first time, had established his world fame and influenced writers like George Bernard Shaw.[62] In the 1930s, Čapek, a committed supporter of the Czechoslovakian Republic under president Tomáš Garrigue Masaryk, watched with increasing apprehension the political developments at home – the radicalisation of ethnic groups like the Sudeten-Germans and the Slovaks – and abroad – the threat emanating from Nazi Germany. His commentary on the political situation of the mid-thirties constitutes one of the semantic levels of *The War with the Newts*. The novel was serialised in 1935 in the liberal newspaper *Lidové noviny* and appeared in book form in 1936. In 1938, the fears of the Czech democrats came true: in the agreement of Munich, France and Great Britain granted Germany the right to seize the border territories inhabited by the German minority. In March 1939, German troops occupied, in violation of international treaties, the remaining territory of Czechoslovakia. Karel Čapek died on 25 December 1938 – just in time. His brother Josef was arrested on 1 September 1939. He died in April 1945 in the concentration camp Bergen-Belsen.

* * *

The narrative structure of *The War with the Newts* reflects the modernist subversion of any absolute truth, of any central authority. The story of the newts is told from different perspectives, using multiple narrative voices and stylistic registers. The author's scepticism, his dispensation with authorial command, is announced in the very first sentence – the book begins in the subjunctive, and with a direct address to the reader: 'If

you were to look for the little island of Tana Masa on a map you would find it right on the equator slightly to the west of Sumatra. But if you asked Captain J. van Toch of the *Kandong Bandoeng* what kind of place this Tana Masa was, the place off which he had just dropped anchor, he would curse for a while and then he would tell you that it was the filthiest hole in all the Sunda Islands, even more miserable than Tana Bala […]' (WN 9).[63] The first sentence contains as in a microcosm the formal and epistemological principles of the narrative: the juxtaposition of different forms of knowledge – the documentary 'truth' of the map and the deeply subjective 'truth' of the captain; the appellative structure – the reader is asked to use his imagination; the different linguistic registers – the author's formal, correct speech vs. the captain's coarse swearing; the poetic evocativeness of strange place names together with the abuse of the 'dirty, miserable' places and their inhabitants, inscribing the novel from the beginning within exoticist and colonialist discourse. If its topographical centre is Prague, and Czechoslovakia, the novel also insists from the beginning that this centre is relative, that it is a part of an increasingly connected, cosmopolitan, globalised world.

This polyvocality and 'poly-discursivity' are continued on the narrative macro-level. As the story unfolds, we meet different protagonists, acting at locations all over the globe. Full use is made of the hybridity of the Czech language, its readiness to incorporate phrases from other languages, notably English and German. Captain van Toch (aka Vantoch) for example, a native of the Czech town Jevíčko,[64] has spent forty years of his life in the Dutch merchant navy in the Pacific; as a result, his language is completely hybridised. Not only is his speech peppered with English expressions, he also struggles with the complex Czech declension.[65] The natural and cultural history of the Pacific newts is not told in a linear, consistent fashion; it is full of leaps and gaps, changes of scene, changes of narrative voice. The polyvocality is most spectacular in the central chapter, 'Po stupních civilizace (Dějiny mloků)' ('Up the steps of civilisation [The history of the newts]'), which presents in the manner of an 'objective' zoological paper the newts' rise from obscure amphibians, literally forgotten by evolution in a god-forsaken corner of the Pacific, to humankind's intelligent, powerful rivals. Here, the main text is completely overrun – or inundated, to take up its central maritime metaphor – by its footnotes, so that the history is not told by its 'author', but by the many writers of newspaper articles, scientific reports and other excerpts assembled in the marginal space.

This decentring of narrative authority is pushed even further by the nature of the collection on which the footnotes are based. It is the

completely unsystematic jumble of newspaper cuttings collected by the porter Povondra, whose employer G.H. Bondy is the head of the international trust trafficking in newts. Pan Povondra, an entirely unimportant figure in world history, claims to have set humankind on the road to prosperity – as it at first appears – by admitting Captain van Toch into Mr Bondy's presence, thereby helping to start the gigantic newt trade. Through his collection, Povondra is trying to document his own historical role, a role, however, of which the world is completely unaware. Large gaps in the collection are caused by Povondra's wife who uses the newspaper articles for lighting the fire. The historical record is erased by everyday life.

Science, in particular biology, is one of the many different discourses that are drawn on, and made fun of, in the novel. The main plot line holding together the textual montage is the accelerated evolution of the newts. Captain van Toch discovers a colony of these highly intelligent, large amphibians on Tana Masa, where they are persecuted by the natives as 'sea devils' and constantly decimated by sharks. Van Toch, who is looking for pearls, observes several remarkable facts: (1) the newts can imitate human behaviour; e.g. they learn to open pearl oysters with a knife; (2) the newts can communicate; (3) most remarkably, the newts can invent: they have found out on their own how to build breakwaters and dams to protect their habitat from the tides and from sharks. Together with their bipedalism, this makes them almost human. The captain is commercially interested in the animals' ability to dive for pearls, and also feels a kind of sentimental pity for the forlorn, child-like creatures. He proposes a deal to the financial magnate Bondy, his compatriot from Jevíčko: they will supply the newts with knives and harpoons against the sharks; in return, they will receive pearls. In search for new pearl grounds, van Toch disseminates the newts across the Pacific. This is the beginning of a new evolutionary phase in the species' history.

The deal is, for obvious reasons, kept secret from the public. In consequence, people are amazed at the sudden appearance of the intelligent animals who even learn to speak. The media and different scientists propose incompatible theories about the 'antediluvian' animals. Finally, an article in the *National Geographic* declares the newts to be identical with the so-called 'poor sinner' or *Homo diluvii testis*, a fossil found and described by Johann Jakob Scheuchzer in 1726 and later identified by Cuvier as the skeleton of an extinct newt, *Andrias Scheuchzeri Tschudi*. This is the name under which the newts become generally known. Scheuchzer's fossil really exists;[66] throughout, Čapek ingenously blends true facts with extravagant fantasy.

As Prof. Dr. Vladimír Uher, of the University of Brno, suggests in an article for *Lidové noviny* (the newspaper in which *The War with the Newts* was first published), the great scientific question is not the newts' ability to produce articulate speech, but their origin:

> The scientific mystery of Andrias Scheuchzeri lay elsewhere: for instance, where did it come from; where were its origins, the place where it survived entire geological periods; why had it remained unknown for so long when it was now appearing in large numbers virtually throughout the equatorial zone of the Pacific? It would seem that it had recently been multiplying with unusual rapidity; where did that enormous vitality come from in an ancient tertiary creature which, until not long ago, had led a totally unobserved, and hence presumably very sporadic and indeed probably geographically isolated, existence? Was it possible that the environmental conditions of this fossil newt had somehow changed in a biologically favourable direction, so that this rare Miocene relic was now enjoying a new and astonishingly successful evolutionary phase? In that case it could not be ruled out that Andrias would not only multiply quantitatively but also develop qualitatively, so that science would have a unique opportunity for witnessing, at least in one animal species, a major mutation *in actu*. (WN 91)[67]

On account of Andrias' great age, the species should be exhausted, degenerating, dying – yet the newts exhibit an immense, inexplicable vitality and fecundity. Here as elsewhere Čapek shows up the partly conjectural character of natural science. Prof. Uher makes far-reaching claims without a basis in reliable data, in fact, with hardly any data at all apart from vague reports on various newt sightings. However, both his speculations about the change in living conditions and his prediction about the quantitative and qualitative evolution of the newts turn out to be correct. The qualitative jumps in their development take place in two distinct periods: the first phase is the 'age of Captain van Toch', an adventurous, paternalistic imperialism, compared by G.H. Bondy to the imperial romances of Kipling and Conrad, in which the newts – in the beginning only a handful of colonies in the Pacific Ocean, but multiplying quickly – are used for the 'romantic' enterprise of pearl-diving. The second is the 'age of Bondy', the era of global capitalism. Romance is gone, business rules. The newts are bred in aquatic 'farms' and sold worldwide as cheap labour, employed particularly for construction work in coastal regions. In this period, the newts multiply from 6 million to 300 million.

The first two parts of the novel ('I. Andrias Scheuchzeri' and 'II. Po stupních civilizace' ['Up the steps of civilisation']) depict the different stages of this evolution. Evolution, under the conditions of a civilised, human-dominated world, equals a progress in suffering. The rise of the newts entails a passage through the various institutions in which animals are enclosed, gazed at and tormented by humans: the zoo, the circus, the laboratory. The first speaking newt, Andrew Scheuchzer, creates a sensation at the London Zoo and dies of overfeeding by the visitors. The creatures exhibited as 'Captain Van Toch's Trained Lizards' at the circus are sick, apathetic and miserable. And the laboratory animals suffer the worst fate.

Ironically, in the case of the newts the term 'laboratory animals' has a double meaning. At this stage of their development, they have made enough progress to understand and practice science; they are animals *working* at the lab. The newts are now more than the mute objects of the scientific gaze, they have become reasonable subjects. Nevertheless, the subject status that would exempt them from undergoing vivisection is denied them. One of the most poignant passages in the novel is the 'Bericht über die somatische Veranlagung der Molche' ('Report on the Somatic Disposition of Newts', German title in the Czech original) about experiments with newts by Hamburg researcher Wuhrmann:

> The first series of experiments was designed to determine how long a Newt can live outside water. The experimental animals were kept in dry tanks at a temperature between 40° and 50° C. After a few hours they exhibited obvious signs of fatigue; if they were sprinkled they revived. After twenty-four hours they lay motionless, moving only their eyelids; their heartbeat was slowed down and all body activity reduced to a minimum. The animals were clearly suffering and the slightest movement entailed a great effort. After three days a state of cataleptic rigour (xerosis) set in: the animals did not react even to burning with the electric cautery. When the humidity of the air was increased they exhibited at least a few signs of life (they shut their eyes to bright light, etc.). If, after seven days, such a dessicated Newt was thrown into the water it recovered after some considerable time; with more prolonged desiccation, however, the major part of the experimental animals perished. In direct sunlight they die within a few hours. (WN 138)[68]

The similarity of this report to the experiments perpetrated on prisoners in Dachau concentration camp is chilling. It is tempting to attribute an

extreme degree of prescience to the visionary author. But a more reasonable interpretation is that Čapek extrapolated from experiments practised on animals in his time. In this light, Agamben appears to be right after all when he claims a structural continuity between the criminal experiments carried out at concentration camps and other transgressions against bare life. To the abuse of living creatures in science, Čapek added a further dimension of horror by making its objects reasonable beings. He could not have known that his vision would shortly be surpassed by reality.

As La Mettrie argued in 'Les animaux plus que machines' ('Animals Are More than Machines', 1748),[69] the degradation of animals into pure bodies, into automata that can be cut and burnt in the service of science, equally degrades the scientist: the unfeeling vivisectionist himself becomes an automaton, a machine, and loses the right to be considered a superior being. Čapek's precise description of what is done to lab animals, a description in the objective, unemotional language of a researcher, would in itself suffice to demand an ethical position-taking on the part of the reader. Precisely the lack of animal-protection sentimentality in this ventriloquist piece intensifies the moral anguish necessarily felt on reading it. Without an explicit moral appeal, literature here challenges the reader to reconsider the *in*human treatment of animals, and even more fundamentally, the relation between humans and non-human living beings.

However, Čapek adds another turn of the screw by presenting the newts as extremely anthropomorphic. They are amphibians, they are ugly, they are black – and yet, they never appear as abject. From the beginning, the human likeness of these bipedal, intelligent animals is undeniable – a symbolic relation heightened rather than lessened by their deviating external form. The newts are figurations of oppressed, suffering humanity, a fact acknowledged rather by simple-minded characters like Captain van Toch or the zookeeper Mr Greggs, who teaches Andrew Scheuchzer to speak, than by the self-appointed leaders of mankind, the scientists and captains of industry.

So what does it tell us about the human species that its 'highest', most educated, most intelligent representatives are capable of eating their own colleagues? Science *is* cannibalism, Čapek suggests, built on devouring our fellow-creatures. The Hamburg scientists' research certainly qualifies as cannibalism, if we can define the latter not as the consumption of our own biological kind, but of those, however different they may look, with whom we have worked, broken bread and caroused – our cultural companions. Wuhrmann's research shows that the flesh of Andrias

Scheuchzeri, ordinarily poisonous, is edible if scalded with hot water and pickled in permanganate solution:

> After that it can be boiled or steamed, and will taste like inferior beef. In this way we consumed a Newt we used to call Hans; it was an educated and clever animal with a special talent for scientific work; it used to be employed in Dr Hinkel's department as his laboratory assistant and it could be trusted with the most exacting chemical analyses. We used to have long chats with it in the evenings, amused by its insatiable thirst for knowledge. We were sorry to lose our Hans but he had lost his sight in the course of my trepanation experiments. (WN 140)[70]

Dr Wuhrmann's report tells us that humans are capable of anything, and that they deserve to lose in the final evolutionary battle against the newts.

* * *

If the first two parts of *Válka s mloky* are, primarily, satirical indictments of positivist science, uncontrolled capitalism, human greed and cruelty, in the third part the topical dimension of 1930s politics gains the upper hand. The newts begin to resist. And while hitherto they had been cast as victims, and indeed, in places identification with the Jews was plausible,[71] now they are associated rather with the aggression of Nazi Germany. The references to the current political situation are quite overt; e.g. the Nazi jargon of the 'Aryan race' is parodied in a chapter about the *Nordmolch*:

> A few years after the establishment of the first Newt colonies in the North Sea and the Baltic the German researcher, Dr Hans Thüring, ascertained that the Baltic Newt – undoubtedly in response to its environment – exhibited a number of divergent physical characteristics. It was said to be somewhat paler, to walk more erect, and to have a cranial index suggesting a longer and narrower skull than that of other Newts. This variety was named *der Nordmolch* or *der Edelmolch* (Andrias Scheuchzeri var. nobilis erecta Thüring). (WN 192)[72]

The militant newts, led by a 'Chief Salamander' (English in the original) whose voice on the radio sounds like the *Führer*, begin seriously with their struggle for *Lebensraum*. Whereas humans, at the peak of their civilisation, tried to conquer the seas as a new living space, the newts now turn the tables: they start undermining the coasts they had previously themselves

enlarged in the service of man. For their own ends, the different nations had provided their aquatic workforce with tools, weapons and explosives. These are now used by the newts to hollow out and blow up big chunks of the continents – the greatest part of Louisiana, several Chinese provinces and the coast of Senegambia disappear in gigantic earthquakes. As Wolf Meynert had predicted, the newts turn against the humans and conquer the world. As the victors, they will not spare humanity – it is the final evolutionary battle between humankind and another species. But, unlike the battle between humans and ape-men on Conan Doyle's South American plateau, this time the human species is unlikely to win.

* * *

Years later, the sea has swallowed Great Britain, France and large parts of Germany; the newspapers report that the newts have arrived at Dresden – Saxony, a much nicer country than Prussia in Povondra's opinion, is about to be inundated. Pan Povondra, the porter who a long time ago started the whole newt business by introducing Captain van Toch to G.H. Bondy, is now an old man and a grandfather. Even as he is pooh-poohing his son's concern that the newts could soon begin to demolish Czech territory – after all, old Povondra argues, Bohemia has no sea coast – he sees a newt's head swimming up the Vltava River. So this is the end.

At this moment, as Pan Povondra falls ill and, blaming himself for the soon-to-be-expected end of humankind, awaits his death, the author enters upon the scene. Having been mostly invisible behind the diverse narratives, the scientific documents and the newspaper reports that constitute the novel, in the last chapter the author appears as a persona and begins a dialogue with himself. His 'inner voice' begs him to spare humanity, but the author answers that this is quite out of his power. Man's downfall is the scientific result of political and economic processes which are irreversible:

> Do you suppose *I* am making the continents crumble into dust, do you suppose *I* want this kind of ending? It is simply the logic of events; how can I interfere with it? […] So what's to be done? The world will probably disintegrate and become inundated – but at least it will do so for universally accepted political and economic reasons, at least it will do so with the aid of science, engineering and public opinion, with the application of all human ingenuity! No cosmic catastrophe – just national, power-political, economic and other reasons. What can you do against that? (WN 235–6)[73]

The author rejects the current apocalyptic scenarios of science fiction – his apocalypse is man-made and therefore irreversible. For the same reasons of narrative logic and credibility, he refuses to avail himself of the 'inner voice's' suggestion to let the newts be wiped out, in the manner of Wells's Martians, by an unknown disease: this solution would be 'too cheap'. But what about, his interlocutor goes on, a war of newts against newts? Surely, since the newts have made the transition from a state of nature to civilisation, they are no longer immune to the same conflicts that set men against men? This suggestion is more plausible. The author, sceptical at first, begins to make up a division in the newt world, a clash of civilisations: Captain van Toch's primordial pearl divers, the still savage eastern newts of Lemuria, will wage war in the name of 'true newthood' against the civilised newts of the Western hemisphere, the newts of Atlantis: 'Yes, it will come to a world war of Newts against Newts' (WN 240).[74] This war will end with the extinction of the newts; mankind will recover and invent new legends about the mythical countries France, England and Germany, covered by the waters of the Atlantic. The author lets himself be persuaded by this turn of events: Čapek's deep humanism prevails against his pessimistic view of man. In fiction, if not in reality, hope, love and compassion for mankind may after all be victorious over the technocratic logic of events.

Notes

1 What Animal?: Darwin's Displacement of Man

1. Jacques Derrida, 'The Animal That Therefore I Am (More to Follow)', *Critical Inquiry* 28/2 (2002): 369–418.
2. W.H. Auden, 'Address to the Beasts'. *The Faber Book of Beasts*. Ed. Paul Muldoon. London: Faber & Faber, 1997. 1–3.
3. Natural History Museum London, 2008, http://www.nhm.ac.uk/visit-us/whats-on/darwin/index.html, accessed 10.11.2009.
4. The Beagle Project, http://www.thebeagleproject.com/voyages.html, accessed 10.11.2009.
5. See Diana Donald and Jane Munroe, *Endless Forms: Charles Darwin, Natural Science, and the Visual Arts* (New Haven, Conn. and London: Yale University Press, 2009).
6. University of Cambridge, 2009, http://www.darwin2009.cam.ac.uk/, accessed 10.11.2009.
7. A recent literary example is Will Self's satire on primatologist discourse, in particular the work of Dian Fossey and Jane Goodall – and the sentimental idolisation of the same – in *Great Apes*. See Dian Fossey, *Gorillas in the Mist* (London: Phoenix, 2001), Jane Goodall, *My Friends the Wild Chimpanzees* (Washington, DC: National Geographic Society, 1967) and Will Self, *Great Apes* (1997, Harmondsworth: Penguin, 1998).
8. Gillian Beer, *Darwin's Plots. Evolutionary Narrative in Darwin, George Eliot and Nineteenth-Century-Fiction* (Cambridge: Cambridge University Press, 1983, repr. 2000, 2009) and George Levine, *Darwin and the Novelists. Patterns of Science in Victorian Fiction* (Harvard University Press, 1988).
9. George Levine, 'Reflections on Darwin and Darwinizing', *Victorian Studies* 51.2 (2009): 223–45, 231–2.
10. Redmond O'Hanlon, *Joseph Conrad and Charles Darwin: the Influence of Scientific Thought on Conrad's Fiction* (Edinburgh: Salamander, 1984), Michael Wainwright, *Darwin and Faulkner's Novels: Evolution and Southern Fiction* (Basingstoke: Palgrave Macmillan, 2008).
11. Martin Fichman, *Evolutionary Theory and Victorian Culture* (Amherst, NY: Humanity Books, 2002), Jonathan Smith, *Charles Darwin and Victorian Visual Culture* (Cambridge: Cambridge University Press, 2006).
12. David Amigoni, *Colonies, Cults and Evolution: Literature, Science and Culture in Nineteenth-Century Writing* (Cambridge: Cambridge University Press, 2007).
13. Gowan Dawson, *Darwin, Literature and Victorian Respectability* (Cambridge: Cambridge University Press, 2007).
14. Amigoni, *Colonies, Cults and Evolution*, 27.
15. Joseph Carroll, *Literary Darwinism. Evolution, Human Nature, and Literature* (New York and London: Routledge, 2004), 23–5. For a thorough critique of Carroll's approach, see Frank Kelleter, 'A Tale of Two Natures: Worried

Reflections on the Study of Literature and Culture in an Age of Neuroscience and Neo-Darwinism,' *Journal of Literary Theory* 1.1 (2007): 153–89.

16. See Elizabeth Grosz, *The Nick of Time. Politics, Evolution, and the Untimely* (Durham: Duke University Press, 2005), 8.
17. Thomas Henry Huxley, *Evidence as to Man's Place in Nature* (London: Williams and Norgate, 1863), 57. In the following, references are given after the quote with the abbreviation MPN.
18. Giorgio Agamben, *The Open. Man and Animal*, transl. Kevin Attell (Stanford: Stanford University Press, 2004), 16.
19. The normative implications of contemporary biotechnology – but also the possible emancipatory potential of a de-naturalisation of the female body in particular – have been explored by Donna Haraway in her seminal essays 'A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century' in *Simians, Cyborgs, and Women* (New York: Routledge, 1991), 149–81, and 'The Biopolitics of Postmodern Bodies' in *American Feminist Thought at Century's End: A Reader*, ed. Linda S. Kauffman (Oxford: Blackwell, 1993), 199–234. See also Anne Balsamo, *Technologies of the Gendered Body. Reading Cyborg Women* (Durham and London: Duke University Press, 1996).
20. Animals are central to contemporary ethical debates in Western societies, a fact reflected in a vast number of recent publications. Significantly, many titles advertise the assumption that humans are just 'other animals', or, vice versa, that animals belong to the cultural realm, are part of an ('other') anthropology: Steve Baker, *Picturing the Beast. Animals, Identity, and Representation*, 2nd edn (1993, Urbana and Chicago: University of Illinois Press, 2001); Hartmut Böhme *et al*. (eds), *Tiere. Eine andere Anthropologie* (Köln and Weimar: Böhlau, 2004); Paola Cavalieri, Peter Singer (eds), *The Great Ape Project. Equality beyond Humanity* (New York: St Martin's Griffin, 1993); J.M. Coetzee, *The Lives of Animals* (Princeton: Princeton University Press, 1999); Erica Fudge, *Perceiving Animals. Humans and Beasts in Early Modern English Culture* (Basingstoke: Palgrave, 2000); Diana Fuss (ed.). *Human, All Too Human* (New York: Routledge, 1996); Jennifer Ham, Matthew Senior (eds), *Animal Acts. Configuring the Human in Western History* (New York: Routledge, 1997); Donna Haraway, *Primate Visions. Gender, Race, and Nature in the World of Modern Science* (New York and London: Routledge, 1989); Arien Mack (ed.), *Humans and Other Animals* (Columbus: Ohio State University Press, 1999); Shirley C. Strum, Linda Marie Fedigan (eds.), *Primate Encounters. Models of Science, Gender, and Society* (Chicago: University of Chicago Press, 2000); Frans de Waal, *The Ape and the Sushi Master. Cultural Reflections by a Primatologist* (New York: Basic Books, 2001); Cary Wolfe (ed.), *Zoontologies. The Question of the Animal* (Minneapolis and London: University of Minnesota Press, 2003). Reaktion Books are running an entire 'Animal Series' about the cultural role of animals, including volumes on *Crow*, *Tortoise*, *Cockroach*, *Ant*, *Oyster*, *Bear* and *Rhinoceros*.
21. Giorgio Agamben, *Homo Sacer. Sovereign Power and Bare Life*, transl. Daniel Heller-Roazen (Stanford: Stanford University Press, 1998), 1.
22. In his last interview, Jacques Derrida identified our treatment of animals as one of the most pressing ethical issues of our times which, however, cannot be resolved in relation to 'rights': 'The relationship between humans and animals is about to change, but I don't believe that this can be based

on rights. Who says "right" says "obligation", and I can't imagine animals observing their obligations…' Jacques Derrida, 'Ce que disait Derrida…' Interview with Franz-Olivier Giesbert. *Le Point*, 14 Oct. 2004, 80–5, 84 (my translation).

23. Gillian Beer, 'Has Nature a Future?' in *The Third Culture: Literature and Science*, ed. Elinor S. Shaffer (Berlin and New York: de Gruyter, 1998), 23.
24. Agamben, *The Open*, 77.
25. Beer, 'Has Nature a Future?', 26–7.
26. For an exploration of the potential of Darwin's thought, based on the idea of continuity between nature and culture, see Grosz, *In the Nick of Time*. For an analysis of the structural analogies between Darwin's and Foucault's work, see Philip Sarasin, *Darwin und Foucault. Genealogie und Geschichte im Zeitalter der Biologie* (Frankfurt a. M.: Suhrkamp, 2009).
27. See Stephen Jay Gould, *Ontogeny and Phylogeny* (Cambridge, Mass. and London: Belknap Press/Harvard University Press, 1977), especially 72–80.
28. Charles Darwin, *The Descent of Man*, ed. H. James Birx (New York: Prometheus Books, 1998), 43. In the following, references are given after the quote with the abbreviation DM.
29. The terms are often employed synonymously. I will use 'regression' to designate the biological, physical and psychological return to earlier developmental stages in the individual, 'degeneration' for the cultural and social dimension; but often, these aspects are indeed inseparable.
30. See Daniel Pick, *Faces of Degeneration. A European Disorder, c. 1848–c. 1918* (Cambridge: Cambridge University Press, 1989) and William Greenslade, *Degeneration, Culture and the Novel 1880–1940* (Cambridge: Cambridge University Press, 1994).
31. David G. Horn, *The Criminal Body. Lombroso and the Anatomy of Deviance* (New York and London: Routledge, 2003), 12. See also Mary Gibson, *Born to Crime. Cesare Lombroso and the Origins of Biological Criminology* (Westport, Conn. and London: Praeger, 2002).
32. Max Nordau, *Degeneration* (Lincoln, Nebr. and London: University of Nebraska Press, 1968), 556.
33. Nordau, *Degeneration*, 16.
34. Nordau, *Degeneration*, 16.
35. Nordau, *Degeneration*, 35–6.
36. Edwin Ray Lankaster, *Degeneration. A Chapter in Darwinism* (London: Macmillan, 1880), 29.
37. Lankaster, *Degeneration*, 59–60.
38. Kelly Hurley, *The Gothic Body. Sexuality, Materialism, and Degeneration at the Fin de Siècle* (Cambridge: Cambridge University Press, 1996), 5.
39. Hurley, *The Gothic Body*, 56.
40. Anne McClintock, *Imperial Leather. Race, Gender and Sexuality in the Colonial Context* (New York: Routledge, 1995), especially 40–2.
41. Susan Bernstein, 'Ape Anxiety: Sensation Fiction, Evolution, and the Genre Question', *Journal of Victorian Culture* 6.2 (2001): 250–71, 255.
42. Bernstein, 'Ape Anxiety', 255.
43. See Robert J.C. Young, *Colonial Desire. Hybridity in Theory, Culture and Race* (London and New York: Routledge, 1995).

2 Creating Connections: Humans, Apes and Missing Links

1. Charles Darwin, Letter to Joseph Hooker, 11 Jan. 1844. *The Life and Letters of Charles Darwin, Including an Autobiographical Chapter*. Vol. 2. Ed. Francis Darwin (London: Murray, 1887), 23.
2. Charles Darwin, *The Origin of Species*. 1859. Ed. Gillian Beer (Oxford, New York: Oxford University Press, 1996), 228.
3. Peter Morton, *The Vital Science. Biology and the Literary Imagination, 1860–1900* (London: Allen & Unwin, 1984), 89.
4. John Milton, *Paradise Lost*, ed. Scott Elledge, 2nd edn (New York and London: Norton, 1993), book VII, vv. 519–34.
5. Hans G. Kippenberg, *Die Entdeckung der Religionsgeschichte. Religionswissenschaft und Moderne* (München: C.H. Beck, 1997), 56.
6. Milton, *Paradise Lost*, book VII, vv. 453–55.
7. Sigmund Freud, *Introductory Lectures on Psycho-Analysis* (1916–17 [1915–17]) in *Standard Edition*, vol. XIV, *Introductory Lectures on Psycho-Analysis* (Part III), 284–5. Original: *Vorlesungen zur Einführung in die Psychoanalyse* in *Studienausgabe*, vol. I, *Vorlesungen zur Einführung in die Psychoanalyse. Neue Folge der Vorlesungen zur Einführung in die Psychoanalyse*, 283. All English quotations from Freud's work refer to The *Standard Edition of the Complete Psychological Works of Sigmund Freud*, vol. I–XXIV, gen. eds James Strachey and Anna Freud (London: Vintage, 2001); references to the German originals are to *Die Studienausgabe der Werke von Sigmund Freud*, vols I–X, ed. Alexander Mitscherlich, Angela Richards, James Strachey (Frankfurt a. M.: Fischer, 1982). On Freud's three upheavals in intellectual history, see Friedel Weinert, *Copernicus, Darwin, & Freud: Revolutions in the History and Philosophy of Science* (Malden, Mass. and London: Wiley–Blackwell, 2009).
8. Friedrich Nietzsche, *On the Genealogy of Morals: A Polemic. By way of clarification and supplement to my last book Beyond Good and Evil*, transl. Douglas Smith (Oxford: Oxford University Press, 1999), 65. Original: *Zur Genealogie der Moral* in *Kritische Studienausgabe*, vol. 5, ed. Giorgio Colli and Mazzino Montinari, 3rd edn (Munich and Berlin: DTV/de Gruyter, 1993), 323.
9. Alexander Pope, *An Essay on Man* (1733/34) in *The Poems of Alexander Pope*, vol. III.i. (The Twickenham Edition of the Poems of Alexander Pope), ed. Maynard Mack (London: Methuen, 1958), 36, vv. 173–5.
10. The 'centrality' of man in the geocentric system is also less splendid than Freud suggests: according to Arthur O. Lovejoy, man's central position in the universe placed him closer to hell than to heaven – 'the geocentric cosmography served rather for man's humiliation than for his exaltation'. Arthur O. Lovejoy, *The Great Chain of Being. A Study of the History of an Idea* (Cambridge, Mass.: Harvard University Press, 1957), 102.
11. For this definition, see Thomas Junker, Uwe Hoßfeld, *Die Entdeckung der Evolution. Eine revolutionäre Theorie und ihre Geschichte* (Darmstadt: Wissenschaftliche Buchgesellschaft, 2001), 16. In the following account, I will also draw on Peter J. Bowler, *Life's Splendid Drama. Evolutionary Biology and the Reconstruction of Life's Ancestry 1860–1940* (Chicago and London: University of Chicago Press, 1996); Richard Dawkins, *The Blind Watchmaker* (New York and London: Norton, 1986); Stephen Jay Gould, *The Structure of*

Evolutionary Theory (Cambridge, Mass. and London: Belknap Press/Harvard University Press, 2002); Ernst Mayr, *One Long Argument. Charles Darwin and the Genesis of Modern Evolutionary Thought* (Cambridge, Mass.: Harvard University Press, 1991); Ernst Mayr, *What Evolution Is* (New York: Basic Books, 2001); Michael Ruse, *The Darwinian Revolution. Science Red in Tooth and Claw*, 2nd edn (Chicago and London: University of Chicago Press, 1999); Robert M. Young, *Darwin's Metaphor. Nature's Place in Victorian Culture* (Cambridge: Cambridge University Press, 1985).

12. Lovejoy, *The Great Chain of Being*, 242.
13. For an analysis of the evolutionary ladder as a new cultural paradigm in the Victorian age, see Tobias Döring, 'Scales and Ladders: Natural History and Map Media in Conan Doyle's *The Lost World* and Wilson Harris's *The Secret Ladder*' in *Lost Worlds and Mad Elephants. Literature, Science and Technology 1700–1990*, ed. Elmar Schenkel and Stefan Welz (Glienicke and Cambridge, Mass.: Galda & Wilch Verlag, 1999), 243–58. See also Julia Voss's analysis of Darwin's diagrams of evolution, in Julia Voss, *Darwins Bilder. Ansichten der Evolutionstheorie 1837–1874* (Frankfurt a. M.: S. Fischer Verlag, 2007), 95–163.
14. For the temporalisation of the chain of being and its transformation into a dynamic ladder, see Lovejoy, *The Great Chain of Being*, 244–7 and Wolf Lepenies, *Das Ende der Naturgeschichte. Wandel kultureller Selbstverständlichkeiten in den Wissenschaften des 18. und 19. Jahrhunderts* (München: Hanser, 1976), 63.
15. Junker, Hoβfeld, *Die Entdeckung der Evolution*, 41.
16. Erasmus Darwin put forward his ideas in the didactic poems *The Loves of the Plants* (1789), *The Botanic Garden* (1791) and *Zoonomia* (1794–96). While the first two focus on the sexuality of plants, based on Linnaeus' classificatory system, in *Zoonomia* E. Darwin proposed a theory of living 'filaments' from which all animals and plants had evolved. Charles Darwin studied his grandfather's work closely during his time at Edinburgh. Cf. Janet Browne, *Charles Darwin: Voyaging* (Princeton: Princeton University Press, 1995), 83–85, and Londa Schiebinger, 'The Private Life of Plants: Sexual Politics in Carl Linnaeus and Erasmus Darwin' in *Science and Sensibility. Gender and Scientific Enquiry 1780–1945*, ed. Marina Benjamin (Oxford: Blackwell, 1991), 121–43.
17. See Gould's comments on the giraffe example as 'the greatest cliché and exemplar' in the legend of Lamarck. Gould, *The Structure of Evolutionary Theory*, 188.
18. A concise introduction to Lamarck's work is Ludmilla J. Jordanova, *Lamarck* (Oxford and New York: Oxford University Press, 1984); a more extended, and still standard, treatment is F.W. Burkhardt Jr, *The Spirit of System. Lamarck and Evolutionary Biology* (Cambridge, Mass.: Harvard University Press, 1977). For an account of Lamarck's theory in the wider context of French science, see P. Corsi, *The Age of Lamarck. Evolutionary Theory in France, 1790–1830* (Berkeley: University of California Press, 1988). See also the chapter on Lamarck in Gould, *The Structure of Evolutionary Theory*, 170–92.
19. See Michel Foucault, *The Order of Things. An Archaeology of the Human Sciences*, transl. from French (1966, London: Tavistock Publications, 1986).
20. Jean Baptiste Lamarck, *Zoological Philosophy. An Exposition with Regard to the Natural History of Animals* (Chicago and London: University of Chicago

Press, 1984), 1, my emphasis. In the following, references are given after the quote with the abbreviation ZP.

21. The idea of fluids as agents of internal communication and change was not as bizarre to Lamarck's contemporaries as it may seem to us: 'Lamarck drew on mainstream physics and chemistry in his use of subtle fluids which was inspired partly by his commitment to simple, economical explanations, and partly by his desire to make the inner recesses of nature easier to visualise and so more accessible to scientific understanding'. Jordanova, *Lamarck*, 49.
22. Gould, *The Structure of Evolutionary Theory*, 176.
23. Apart from Cuvier in France, Charles Lyell in England was one of the greatest opponents of the idea of the transmutation of species – although his own work on geology would provide the framework for Darwin's theory. In the second volume of his *Principles of Geology* (1832), Lyell gave a detailed refutation of Lamarck's thesis; see Lyell, *Principles of Geology*, vol 2 (Cambridge: Cambridge University Press, 2009), 3–14 and 18–35. However, this critique had the opposite of the desired effect on at least one reader: Herbert Spencer was converted precisely by Lyell's counter-arguments – which he rejected as irrational – to evolutionism; he incorporated Lamarck's theory into his *Principles of Psychology* (1855).
24. Bowler, *Life's Splendid Drama*, 74–5.
25. So called because the Eighth Earl of Bridgewater had commissioned in his will these eight texts demonstrating 'the Power, Wisdom, and Goodness of Good, as manifested in the Creation', published in the 1830s. See Ruse, *The Darwinian Revolution*, 71. The authors were eminent scientists like William Whewell (on astronomy) or William Buckland (on geology).
26. Ruse, *The Darwinian Revolution*, 40.
27. Ruse, *The Darwinian Revolution*, 40.
28. Darwin was directly influenced by Lyell: he read his *Principles of Geology* (1830–33) during his voyage on the *Beagle*, at the time when he made the observations that would eventually lead to his formulation of evolution theory; see Browne, *Charles Darwin: Voyaging*, 186–9. The need for an extremely long time span demanded by Darwin's uniformitarian and gradualist commitment caused him some embarrassment upon the publication of William Thomson's 'The "Doctrine of Uniformity" in Geology Briefly Refuted' (1866) and the downscaling of geological time by the future Lord Kelvin to approximately 100 million years. See Gould, *The Structure of Evolutionary Theory*, 492–502.
29. Robert Chambers, *Vestiges of the Natural History of Creation and Other Evolutionary Writings*, ed. James A. Secord (Chicago and London: University of Chicago Press, 1994), 144. In the following, references are given after the quote with the abbreviation VNH.
30. James A. Secord, 'Introduction' to *Vestiges of the Natural History of Creation*, xliv.
31. Stephen Jay Gould shows that another, less often acknowledged influence on Darwin's model of natural selection was Adam Smith's *laissez-faire* economics; see Gould, *The Structure of Evolutionary Theory*, 123.
32. Charles Darwin, *The Origin of Species*, ed. Gillian Beer (Oxford and New York: Oxford University Press, 1996), 6. In the following, references are given after the quote with the abbreviation OS.

33. See Charles Darwin, Alfred Russel Wallace, 'On the Tendency of Species to Form Varieties; and on the Perpetuation of Varieties and Species by Natural Means of Selection' in *Adam or Ape. A Sourcebook of Discoveries about Early Man*, ed. L.S.B. Leakey, Jack Prost, Stephanie Prost, 2nd edn (Cambridge, Mass.: Schenkman Books, 1982), 3–19. On Wallace, see also Martin Fichman, *An Elusive Victorian. The Evolution of Alfred Russel Wallace* (Chicago: University of Chicago Press, 2004).
34. Darwin, Wallace, '*On the Tendency of Species to Form Varieties*', 14.
35. Gould stresses the double achievement of Darwin's book: '[T]he *Origin* should be understood as a book encompassing two opposite, but complementary, poles of science at its best and most revolutionary – first, as a methodological treatise proving by example that evolution can be tested and studied fruitfully; and second, as an intellectual manifesto for a new view of life and nature.' Gould, *The Structure of Evolutionary Theory*, 115.
36. See Martin Brasier, *Darwin's Lost World. The Hidden History of Animal Life* (Oxford: Oxford University Press, 2009).
37. This problem led Wallace, otherwise a much stricter adherent to the principle of natural selection than Darwin, to exclude the development of human rationality and moral sense from evolution based on random variation and selection: 'a superior intelligence has guided the development of man in a definite direction'. Alfred Russel Wallace, 'The Action of Natural Selection on Man' in *Half Hours with Modern Scientists. Lectures and Essays* (New Haven, Conn.: Charles C. Chatfield & Co, 1873), 57.
38. Huxley reserved his judgement about natural selection, but he publicly supported Darwin's theory as a whole and explored its implications for humankind. See MPN 106.
39. On a detailed study of the conflict between Owen and Huxley, see Christopher E. Cosans, *Owen's Ape and Darwin's Bulldog. Beyond Darwinism and Creationism* (Bloomington, Ind.: Indiana University Press, 2009).
40. See Alvar Ellegård, *Darwin and the General Reader: The Reception of Darwin's Theory of Evolution in the British Periodical Press, 1859–1872* (Chicago: University of Chicago Press, 1990).
41. Samuel Wilberforce, 'Review of Charles Darwin's *On the Origin of Species*' (1860) in *Adam or Ape. A Sourcebook of Discoveries about Early Man*, ed. L.S.B. Leakey, Jack Prost, Stephanie Prost, 2nd edn (Cambridge Mass.: Schenkman Books, 1982), 22.
42. Wilberforce, 'Review of Charles Darwin's *On the Origin of Species'*, 31.
43. George Levine, *Darwin Loves You. Natural Selection and the Re-enchantment of the World* (Princeton: Princeton University Press, 2006), 41.
44. Grant Allen, *Charles Darwin* (London: Longmans, Green, and Co, 1885), 115.
45. Allen, *Charles Darwin*, 141–2.
46. Thomas S. Kuhn, *The Structure of Scientific Revolutions* (Chicago and London: University of Chicago Press, 1962), 23.
47. Gould, *Ontogeny and Phylogeny*, 69.
48. Bowler, *Life's Splendid Drama*, 15.
49. Paul B. Du Chaillu, *Explorations and Adventures in Equatorial Africa, with Accounts of the Manners and Customs of the People, and of the Chace of the Gorilla, Crocodile, Leopard, Elephant, Hippopotamus and other Animals*, ed. L. Stanley Jast

(London: T. Werner Laurie, 1945), 60. In the following, references are given after the quote with the abbreviation EA.

50. Richard Owen, *On the Classification and Geographical Distribution of the Mammalia, Being the Lecture on Sir Robert Reade's Foundation, Delivered before the University of Cambridge, in the Senate-House, May 10, 1859, To which is Added an Appendix 'On the Gorilla', and 'On the Extinction and Transmutation of Species'* (London: John W. Parker and Son, 1859), 49.
51. Owen, *On the Classification of the Mammalia*, 103. See also Richard Owen, *Memoir on the Gorilla* (Troglodytes Gorilla; *Savage*) (London: Taylor and Francis, 1865).
52. On the story of the Fuegians brought by Captain Fitzroy to England, given a fast-track introduction to 'civilisation' and then returned, in the course of the voyage in which Darwin participated, to their native tribe, see Nick Hazlewood, *Savage. The Life and Times of Jemmy Button* (New York: St Martin's Press, 2001) and Virginia Richter, 'Darwin in Patagonia: Descriptive Strategies in the *Beagle Diary* and *The Voyage of the Beagle*' in *British Narratives of Exploration: Case Studies on the Self and Other*, ed. Frédéric Regard (London: Pickering & Chatto, 2009), 167–78. On Darwin's position on racism and the slavery question in particular, see Adrian Desmond and James Moore, *Darwin's Sacred Cause. Race, Slavery and the Quest for Human Origins* (London: Allen Lane, 2009).
53. Harriet Ritvo, *The Animal Estate: The English and Other Creatures in the Victorian Age* (Cambridge, Mass.: Harvard University Press, 1987), 39.
54. Ritvo, *The Animal Estate*, 40.
55. Lovejoy, *The Great Chain of Being*, 232.
56. Aram Vartanian, 'Trembley's Polyp, La Mettrie, and Eighteenth-Century French Materialism' in *Journal of the History of Ideas* 9.3 (1950), 265–6.
57. See Karl J. Fink, *Goethe's History of Science* (Cambridge: Cambridge University Press, 1991), 21–5.
58. Johann Wolfgang von Goethe, 'An Intermaxillary Bone Is Present in the Upper Jaw of Man As Well As in Animals' (Jena 1786) in *Scientific Studies* (*Goethe: The Collected Works,* vol. 12), ed. and transl. Douglas Miller (New York: Suhrkamp Publishers, 1988), 115–16. Original: 'Versuch aus der vergleichenden Knochenlehre dass der Zwischenknochen der obern Kinnlade dem Menschen mit den übrigen Tieren gemein sei' [1784] in *Schriften zur Morphologie* (*Sämtliche Werke. Briefe, Tagebücher und Gespräche,* vol. 24), ed. Dorothea Kuhn (Frankfurt a.M.: Deutscher Klassiker Verlag, 1987), 23.
59. 'Rather, the human being is most intimately related to animals' (my translation). Johann Wolfgang von Goethe, 'Brief an Knebel, 17 Nov. 1784' in *Das erste Weimarer Jahrzehnt* (*Sämtliche Werke. Briefe, Tagebücher und Gespräche,* vol. 29/2), ed. Hartmut Reinhardt (Frankfurt a.M.: Deutscher Klassiker Verlag, 1997), 553.
60. See Timothy Lenoir, 'The Eternal Laws of Form: Morphotypes and the Conditions of Existence in Goethe's Biological Thought' in *Goethe and the Sciences: A Reappraisal*, eds Frederick Amrine, Francis J. Zucker and Harvey Wheeler (Dordrecht: Reidel, 1987), 22.
61. Lenoir, 'The Eternal Laws of Form', 26–7.
62. For a historical survey on palaeoanthropology and evolution theory, see the original essays by Schaafhausen, Dubois and others in Leakey, Prost, Prost,

Adam or Ape; see also George W. Stocking, Jr, *Victorian Anthropology* (New York: The Free Press, 1987); Peter J. Bowler, *Fossils and Progress. Paleontology and the Idea of Progressive Evolution in the Nineteenth Century* (New York: Science History Publications, 1976); Peter J. Bowler, *Life's Splendid Drama*; Roger Lewin, *Bones of Contention. Controversies in the Search for Human Origins* (Chicago and London: University of Chicago Press, 1987). For a detailed account of the fascinating history of the Archaeopteryx, from 1861 to recent controversies, see Paul Chambers, *Bones of Contention. The Archaeopteryx Scandals* (London: John Muray, 2002). For the function of dinosaurs in the cultural imaginary of the Victorian period and after, see W.J.T. Mitchell, *The Last Dinosaur Book. The Life and Times of a Cultural Icon* (Chicago and London: University of Chicago Press, 1998).

63. For the fundamental transformation of the dinosaurs' public image from the early Victorian era – giant clumsy creatures – to the twentieth century – fast predators – see Mitchell, *The Last Dinosaur Book*, 48–56 and 103–9. The 'paradigmatic dinosaur' of the Victorians was the *Iguanodon*, whereas the modern stage was shared by the *Tyrannosaurus rex* and *Brontosaurus* (and the 'postmodern dinosaur' is exemplified by *Velociraptor*, the intelligent hunter spotlighted in Spielberg's *Jurassic Park*, see Mitchell, *The Last Dinosaur Book*, 104.)
64. Chambers, *Bones of Contention*, 107.
65. Carlo Ginzburg, *Clues, Myths, and the Historical Method*, transl. John and Anne Tedeschi (Baltimore: Johns Hopkins University Press, 1989), 97.
66. Sigmund Freud, 'The Moses of Michelangelo' (1914) in *Standard Edition,* vol. XIII. *Totem and Taboo and Other Works*, 222. Original: 'Der Moses des Michelangelo'[1914] in *Studienausgabe*, vol. 10. *Bildende Kunst und Literatur*, 207.
67. In 'The Adventure of the Cardboard Box'. Significantly, in this story Holmes offers one of the most elaborate demonstrations of his method, 'deducing' Dr Watson's thought processes from his facial expressions and gestures, thereby reproducing C. Auguste Dupin's 'mind-reading' in 'The Murders of the Rue Morgue'. See Ginzburg's discussion of this story in relation to Morelli's method in *Clues, Myths, and the Historical Method*, 98.
68. The deliberate self-representation of these theories as exact sciences is subverted by their own rhetorical strategies: 'It is also strange that Lombroso, as a self-proclaimed positivist, mixed various types of 'soft' qualitative evidence with his statistical data. [...] Most surprisingly, *Criminal Man* and other writings of Lombroso are packed with quotations from literature and folklore, a characteristic that displayed his wide reading in a number of fields but casts further doubt on his claim to be scientific. [...] [F]ictional examples came to carry the same explanatory weight as data drawn from his own experiments and interviews.' Gibson, *Born to Crime*, 29. In fact, this inconsistency is not surprising at all; the very nature of criminology as a liminal science demands the inclusion of 'soft', narrative data.
69. Lorraine Daston and Peter Galison, *Objectivity* (New York: Zone Books, 2007), 17.
70. Thomas Henry Huxley, 'The Method of Zadig' (1880) in *The Major Prose of Thomas Henry Huxley*, ed. Alan P. Barr (Athens, Ga., and London: University of Georgia Press, 1997), 243. In the following, references are given after the quote with the abbreviation MZ.

71. It is ironic that Darwin at first overlooked the significance of the geographical distribution of the Galapagos finches and had to be put on the right track by the ornithologist John Gould.
72. Piltdown man, discovered in 1912 in Sussex, was considered to be one of the most important hominid fossil finds; instead it turned out to be one of the most elaborate frauds of modern science. The 'fossils' presented to the Geological Society by Charles Dawson, a local antiquarian who had made the discovery, and Arthur Smith Woodward, keeper of the geology department of the Natural History Museum, consisted of a human skull, a simian jaw and human teeth. Woodward claimed the *Eoanthropus* (Dawn Man) as the true missing link between early hominids and apes. While a heated controversy followed, the forgery was detected only in 1953 by Joseph Weiner, a professor of physical anthropology: an unknown perpetrator had joined a 620 year old human cranium to the jaw of an orang-outang from Borneo or Sumatra, aged 500 years. See Frank Spencer, *Piltdown. A Scientific Forgery* (London: Natural History Publications/Oxford University Press, 1990), John Evangelist Walsh, *Unraveling Piltdown. The Science Fraud of the Century and Its Solution* (New York: Random House, 1996), Joseph S. Weiner, 'Excerpts from *The Piltdown Forgery*' in *Adam or Ape*, ed. Leakey, Prost, Prost (Cambridge, MA: Schenkman Books, 1982), 327–47.
73. See Junker and Hoβfeld, *Die Entdeckung der Evolution*, 129–36, and Lewin, *Bones of Contention*, 63–71.
74. The question of the 'antiquity of man' constituted a major controversy in palaeoanthropology in the 1860s, not only simultaneous, but closely connected to the debates on evolution theory. See A. Bowdoin Van Riper, *Men among the Mammoths. Victorian Science and the Discovery of Human Prehistory* (Chicago and London: University of Chicago Press, 1993), esp. 144–83.
75. Herrmann Schaaffhausen, 'On the Human Skeleton from the Neander Valley' [1858] in *Adam or Ape*, eds Leakey, Prost, Prost, 2nd edn (Cambridge, Mass.: Schenkman Books, 1982), 160.
76. See Lewin, *Bones of Contention*, 19–20.
77. Ernst Haeckel, *Natürliche Schöpfungsgeschichte* (Berlin: Reimer, 1868), 507.
78. Ernst Haeckel, *The History of Creation: Or the Development of the Earth and its Inhabitants by the Action of Natural Causes*, transl. E. Ray Lankester, Vol. 2 (New York: D. Appleton and Company, 1876), 326–7. Original: Haeckel, *Natürliche Schöpfungsgeschichte*, 514.
79. McClintock, *Imperial Leather*, 36–9.
80. McClintock, *Imperial Leather*, 40.
81. Gillian Beer, 'Forging the Missing Link: Interdisciplinary Stories' in *Open Fields: Science in Cultural Encounter* (Oxford: Clarendon Press, 1996), 118.
82. See Peter Brooks's analogous argument in *Reading for the Plot. Design and Intention in Narrative* (Cambridge, Mass.: Harvard University Press, 1992), esp. 90–112.
83. Beer, 'Forging the Missing Link', 120.
84. Beer, 'Forging the Missing Link', 121.
85. See Homi Bhabha, *The Location of Culture* (London and New York: Routledge, 1994), 36–9 and Claudia Breger, Tobias Döring (eds.), *Figuren der/des Dritten. Erkundungen kultureller Zwischenräume* (Amsterdam: Rodopi, 1998).

86. Arthur Conan Doyle, *The Lost World*, ed. Ian Duncan (Oxford: Oxford University Press, 1998), 117. In the following, references are given after the quote with the abbreviation LW.
87. Sigmund Freud, 'The "Uncanny"' (1919) in *Standard Edition*, Vol. XVII: *An Infantile Neurosis and Other Works*, 220. Original: 'Das Unheimliche' (1919) in *Studienausgabe*, Vol. 4, *Psychologische Schriften*, 244.
88. Freud, 'The "Uncanny"', 240–1. Original: 'Das Unheimliche', 263.

3 Apes and Ape-men: The Anxiety of Simianisation

1. Peter Høeg, *The Woman and the Ape*. Transl. Barbara Haveland. London: Harvill, 1996. 127.
2. Jacques Lacan, 'The Mirror Stage as formative of the function of the I as revealed in psychoanalytic experience' in *Ecrits. A Selection*, transl. Alan Sheridan (London: Tavistock Publications, 1980), 1.
3. According to Hegel, the self, i.e. a sense of self-awareness (*Selbstbewußtsein*), is constituted only through the recognition by an other: 'Self-consciousness exists in itself and for itself, in that, and by the fact that it exists for another self-consciousness; that is to say, it *is* only by being acknowledged or "recognized"' G.W.F. Hegel, *The Phenomenology of Mind*, transl. J.B. Baillie, 2nd rev. edn (Mineola, NY: Dover Publications, 2003), 104. Original: *Phänomenologie des Geistes* (Frankfurt a.M.: Suhrkamp, 1986), 145.
4. John Berger, 'Why Look at Animals?' in *About Looking* (New York: Pantheon Books, 1980), 2–3.
5. See also W.J.T. Mitchell on the function of animals in illusionism in art, in *Picture Theory. Essays on Verbal and Visual Representation* (Chicago and London: University of Chicago Press, 1994), 333.
6. Gerhard Neumann, 'Der Blick des Anderen. Zum Motiv des Hundes und des Affen in der Literatur' in *Jahrbuch der Deutschen Schillergesellschaft*, eds. Wilfried Barner, Walter Müller-Seidel, Ulrich Ott (Stuttgart: Kröner, 1996), 99.
7. Neumann, 'Der Blick des Anderen', 100–1.
8. Horst W. Janson, *Apes and Ape Lore in the Middle Ages and the Renaissance* (London: The Warburg Institute, University of London, 1952), 107. On animals in the Middle Ages more generally, see Joyce E. Salisbury, *The Beast Within. Animals in the Middle Ages* (New York and London: Routledge, 1994). On the ape as a border figure between humans and animals, see Virginia Richter, '*Blurred copies of himself:* Der Affe als Grenzfigur zwischen Mensch und Tier in der europäischen Literatur seit der frühen Neuzeit' in *Topographien der Literatur. Deutsche Literatur im transnationalen Kontext,* ed. Hartmut Böhme (Stuttgart: Metzler, 2005).
9. Neumann, 'Der Blick des Anderen', 106.
10. Edgar Allan Poe, 'The Murders in the Rue Morgue', *Tales of Mystery and Imagination*, ed. Graham Clarke (London and Melbourne: Dent, 1984), 411–44, 412. In the following, references are given after the quote with the abbreviation MRM.
11. The international trade in and display of exotic animals as well as people – often at the same venue – constitutes an important background to several

texts discussed here, e.g. Franz Kafka's 'Report to an Academy'. On the history of the modern zoo, see Eric Baratay and Elisabeth Hardouin-Fugier, *Zoo* (London: Reaktion Books, 2002), Wilfried Blunt, *The Ark in the Park* (London: Hamish Hamilton, 1976), Randy Malamud, *Reading Zoos* (New York: New York University Press, 1998) and Nigel Rothfels, *Savages and Beasts* (Baltimore and London: Johns Hopkins University Press, 2002); on freak shows, see Robert Bogdan, *Freak Show* (Chicago and London: University of Chicago Press, 1988).

12. Bhabha, *The Location of Culture*, 85–92.
13. For Victorian views on race, in particular in connection with evolution theory and science, see Christine Bolt, *Victorian Attitudes to Race* (London: Routledge & Kegan Paul, 1971); Nancy Stepan, *The Idea of Race in Science: Great Britain, 1800–1960* (London: Macmillan, 1982); George W. Stocking, *Race, Culture and Evolution* (New York and Chicago: University of Chicago Press, 1968).
14. For constructions of Africa as a phantasmatic space of the Other, closely connected with the notion of evolutionary belatedness, see Alan H. Cairns, *Prelude to Imperialism. British Reactions to Central African Society 1840–1890* (London: Routledge, 1965); Patrick Brantlinger, *Rule of Darkness. British Literature and Imperialism, 1830–1914* (Ithaca and London: Cornell University Press, 1988), 173–97; Ruth Mayer, *Artificial Africas. Colonial Images in the Times of Globalization* (Hannover and London: University Press of New England, 2002).
15. Du Chaillu makes a point of having investigated these stories and found them all completely spurious: '[the gorilla] does not carry off women from the native villages' (EA 348).
16. McClintock, *Imperial Leather*, 241.
17. See McClintock's discussion of the map showing the way to the mines (McClintock, *Imperial Leather*, 1–4), and Laura Chrisman's critique of McClintock's reading which will also be discussed below. Laura Chrisman, *Postcolonial Contraventions. Cultural Readings of Race, Imperialism and Transnationalism* (Manchester and New York: Manchester University Press, 2003), 40–2.
18. Henry Rider Haggard. *King Solomon's Mines*, ed. Dennis Butts (Oxford: Oxford University Press, 1989), 140. In the following, references are given after the quote with the abbreviation KSM.
19. Julia Kristeva, *Powers of Horror. An Essay on Abjection*, transl. Leon S. Roudiez (New York: Columbia University Press, 1982), 4. Original: *Pouvoir de l'horreur. Essai sur l'abjection* (Paris: Editions du Seuil, 1980), 12.
20. Kelly Oliver, *Reading Kristeva. Unravelling the Double-bind* (Bloomington: Indiana University Press, 1993), 56.
21. See Oliver, *Reading Kristeva*, 48–68.
22. McClintock, *Imperial Leather*, 246.
23. McClintock, *Imperial Leather*, 246.
24. Chrisman, *Postcolonial Contraventions*, 41–2.
25. On Kristeva's notion of the sublime mother, see her essay 'Stabat Mater' in *Tales of Love*, transl. Leon Roudiez (New York: Columbia University Press, 1987); and Oliver, *Reading Kristeva*, 61.
26. Cf. McClintock, *Imperial Leather*, 248.

27. Rudyard Kipling, 'Bertran and Bimi' in *Life's Handicap. Being Stories of Mine Own People* (London: Macmillan, 1952), 240–59, 301. In the following, references are given after the quote with the abbreviation BB.
28. Edgar Rice Burroughs, *Tarzan of the Apes* (Mineola, NY: Dover Publications 1997), 1. In the following, references are given after the quote with the abbreviation TA.
29. On European politics in the Congo and the atrocities committed by Leopold I, see Adam Hochschild, *King Leopold's Ghost. A Story of Greed, Terror and Heroism in Colonial Africa* (London: Macmillan, 2000); on the imperialist background to Tarzan, see Eric Cheyfitz, *The Poetics of Imperialism. Translation and Colonisation from The Tempest to Tarzan* (New York and Oxford: Oxford University Press, 1991).
30. Elizabeth Grosz, 'Phallic Mother'. *Feminism and Psychoanalysis. A Critical Dictionary*. Ed. Elizabeth Wright (Oxford and Cambridge, Mass.: Blackwell, 1992), 314–15, 314. Freud develops the concept of the phallic mother in his *Three Essays on the Theory of Sexuality* (*Drei Abhandlungen zur Sexualtheorie*, 1905) and 'Some Psychical Consequences of the Anatomical Distinction between the Sexes' ('Einige psychische Folgen des anatomischen Geschlechtsunterschieds', 1925).
31. Grosz, 'Phallic Mother', 315.
32. Mayer, *Artificial Africas*, 51.
33. Hurley, *The Gothic Body*, 3–4.
34. Hurley, *The Gothic Body*, 6.
35. Hurley, *The Gothic Body*, 6.
36. Hurley, *The Gothic Body*, 7.
37. Hurley, *The Gothic Body*, 14.
38. Brantlinger, *Rule of Darkness*, 227.
39. Hurley, *The Gothic Body*, 79–80.
40. For the connection of imperialism and the supernatural in Kipling, see Lewis D. Wurgast, *The Imperial Imagination. Magic and Myth in Kipling's India* (Middletown, Conn.: Wesleyan University Press, 1983), esp. 55–69 on 'native magic' and British efforts to maintain control.
41. Gilles Deleuze, Félix Guattari, *Mille Plateaux. Capitalisme et Schizophrénie 2* (Paris: Editions de Minuit, 1980), 295.
42. Stephen D. Arata, 'The Occidental Tourist, *Dracula* and the Anxiety of Reverse Colonization', *Victorian Studies* 33.4 (1990): 623.
43. Arata, 'The Occidental Tourist', 623.
44. Arata, 'The Occidental Tourist', 623.
45. Arthur Conan Doyle, 'The Adventure of the Creeping Man' in *The Penguin Complete Sherlock Holmes* (Harmondsworth: Penguin, 1981), 1070–83, 1074. In the following, references are given after the quote with the abbreviation ACM.
46. Robert Louis Stevenson, *Strange Case of Dr Jekyll and Mr Hyde* in *Dr Jekyll and Mr Hyde and Other Stories*, ed. Jenni Calder (Harmondsworth: Penguin, 1979), 27–97, 81. In the following, references are given after the quote with the abbreviation JH.
47. For an interpretation of the split between Jekyll and Hyde as a representation of the division within the body politic, see Tim Youngs, 'Stevenson's Monkey-Business: *Strange Case of Dr Jekyll and Mr Hyde*' in *Beauty and the*

Beast. Christina Rossetti, Walter Pater, R.L. Stevenson and their Contemporaries, ed. Peter Liebregts and Wimm Tigges (Amsterdam: Rodopi, 1996), 156–70.

48. Hurley, *The Gothic Body*, 94.
49. Beer, 'Forging the Missing Link', 142.
50. Youngs, 'Stevenson's Monkey-Business', 162.
51. Thomas Henry Huxley, 'On the Physical Basis of Life' in *The Major Prose of Thomas Henry Huxley*, ed. Alan P. Barr (Athens, Ga., and London: University of Georgia Press, 1997), 175. In the following, references are given after the quote with the abbreviation PBL.
52. H.G. Wells, *The Island of Doctor* Moreau, ed. Brian Aldiss (London: Everyman/J.M. Dent, 1993), 3. In the following, references are given after the quote with the abbreviation IDM.
53. Mary Shelley, *Frankenstein or The Modern Prometheus*, ed. M.K. Joseph (Oxford: Oxford University Press, 1980), 57.
54. Jonathan Swift, *Gulliver's Travels*, ed. Peter Dixon, John Chalker (Harmondsworth: Penguin, 1967), 339.
55. See Margot Norris, *Beasts of the Modern Imagination. Darwin, Nietzsche, Kafka, Ernst, and Lawrence* (Baltimore: John Hopkins University Press, 1985).
56. On the figure of the civilised ape see Virginia Richter, 'The Civilised Ape' in *Embracing the Other: Addressing Xenophobia in the New Literatures in English*, ed. Dunja M. Mohr (Amsterdam: Rodopi, 2008), 113–24.
57. Machiavelli Colin Clout [Frank Challice Constable], *The Curse of the Intellect* (Edinburgh: William Blackwood & Sons, 1895), 22. In the following, references are given after the quote with the abbreviation CI.
58. The text can be read as a satire on the Nietzschean *Übermensch*, a notion that figures in many ape-tales, e.g. in Burroughs's super-ape-man Tarzan who is not too far removed from Nietzsche's magnificent beast. In *The Curse of Intellect*, the struggle between ape and man hinges on the 'will to power'. Despite the name that situates him as a Nietzschean figure, Power proves to be too weak to win the contest.
59. Neumann, 'Der Blick des Anderen', 116.
60. Franz Kafka, 'Report to an Academy' in *The Metamorphosis and Other Stories*. Transl. Stanley Appelbaum (New York: Dover Publications, 1996), 81–8, 88. In the following, references are given after the quote with the abbreviation RA. German original: 'Bericht für eine Akademie' in *Drucke zu Lebzeiten* (*Schriften – Tagebücher – Briefe. Kritische Ausgabe*), ed. Wolf Kittler, Hans-Gerhard Koch, Gerhard Neumann (Frankfurt a.M.: Fischer, 1994), 313.
61. Gilles Deleuze, Félix Guattari, *Kafka. Pour une littérature mineure* (Paris: Editions de Minuit, 1975), 14.
62. Original: Kafka, 'Ein Bericht für eine Akademie', 299.
63. Original: Kafka, 'Ein Bericht für eine Akademie', 300.
64. Original: Kafka, 'Ein Bericht für eine Akademie', 304.
65. Original: Kafka, 'Ein Bericht für eine Akademie', 312.
66. Gilles Deleuze, Félix Guattari, *A Thousand Plateaus. Capitalism and Schizophrenia*, transl. Brian Massumi (Minneapolis: University of Minnesota Press, 1987), 239. Original: *Mille Plateaux*, 292.
67. Original: Kafka, 'Ein Bericht für eine Akademie', 313.
68. See for example Kenneth Coutts-Smith, 'Some general observations on the problem of cultural colonialism' in *The Myth of Primitivism. Perspectives on Art*,

ed. Susan Hiller (New York and London: Routledge, 1991), 5–18. On primitivism in Western culture more generally, see Marianna Torgovnick, *Gone Primitive. Savage Intellects, Modern Lives* (Chicago and London: University of Chicago Press, 1991).

69. To the texts discussed above one could add, as more recent examples, Daniel Quinn, *Ishmael. An Adventure of the Mind and Spirit* (1992, New York: Bantam Books, 1995) and Peter Høeg, *The Woman and the Ape*, transl. Barbara Haveland (1996, London: Harvill, 1997). In both novels, wise apes (tellingly called Ishmael and Erasmus) who have succeeded in both mastering human language *and* retaining their unity with nature, turn up to save humanity from self-destruction. Against this myth of the wise ape as a superior *homme naturel*, William Boyd pits a thorough deconstruction. His gorillas are not depositories of the eternal wisdom and harmony of nature; they commit infanticide, cannibalism and deliberate killings. By integrating the rivalries of different primatologists into the plot, Boyd analyses both images – the gorilla as gentle giant, the gorilla as killer – as anthropomorphic constructions fulfilling different human needs. William Boyd, *Brazzaville Beach* (1990, Harmondsworth: Penguin, 1991). For a comprehensive study of ape narratives in the twentieth century, see Julika Griem, *Monkey Business. Affen als Figuren anthropologischer und ästhetischer Reflexion 1800–2000* (Berlin: trafo Verlag, forthcoming 2010).
70. On gender politics in primatology and the resulting views on apes, see Brian E. Noble, 'Politics, Gender, and Worldly Primatology: The Goodall-Fossey Nexus' in *Primate Encounters. Models of Science, Gender, and Society*, ed. Shirley C. Strum and Linda Marie Fedigan (Chicago: University of Chicago Press, 2000), 436–62.
71. Norris, *Beasts of the Modern Imagination*, 3–4.
72. Norris, *Beasts of the Modern Imagination*, 1.

4 Missing Links and Lost Worlds: The Anxiety of Assimilation

1. William Hurrell Mallock, *The New Paul and Virginia, or Positivism on an Island*. 1878. Ed. John D. Margolis (Lincoln: University of Nebraska Press, 1970), 118.
2. Haggard, Henry Rider, *Heu-Heu, or The Monster*. 1924 (London: Hutchinson & Co., n.d.), 121.
3. Bernstein, 'Ape Anxiety', 255.
4. Bernstein, 'Ape Anxiety', 256.
5. Jacques Derrida, 'Plato's Pharmacy' in *Dissemination*, transl. Barbara Johnson (Chicago: University of Chicago Press, 1981), 128, emphasis in the original.
6. Derrida, 'Plato's Pharmacy', 152.
7. Derrida, 'Plato's Pharmacy', 133.
8. The discursive/imaginary dimension of cannibalism is explored in William Arens, *The Man-Eating Myth. Anthropology and Anthropophagy* (Oxford and New York: Oxford University Press, 1980); Peter Hulme, *Colonial Encounters. Europe and the Native Caribbean, 1492–1797* (London and New York: Methuen, 1986); Francis Barker, Peter Hulme, Margaret Iversen (eds),

Cannibalism and the Colonial World (Cambridge: Cambridge University Press, 1998); Kristen Guest (ed.), *Eating Their Words. Cannibalism and the Boundaries of Cultural Identity* (New York: State University of New York Press, 2001); Maggie Kilgour, *From Communion to Cannibalism. An Anatomy of Metaphors of Incorporation* (Princeton: Princeton University Press, 1990).

9. The actual occurence of anthropophagy is still hotly debated among anthropologists, e.g. concerning ritual cannibalism and the resulting transmission of Kuru among the Fore people of Papua New Guinea; see William Arens, 'Rethinking Anthropophagy' in *Cannibalism and the Colonial World*, ed. Francis Barker, Peter Hulme, Margaret Iversen (Cambridge: Cambridge University Press, 1998), 39–62. However, both Arens in *Man-Eating Myth* and Hulme in *Colonial Encounters* have convincingly demonstrated the unreliable and mostly circumstantial nature of the evidence of cannibalism. Irrespective of this debate, the accusation of cannibalism functioned as both a powerful fantasy about exotic peoples and a power tool within imperial discourse.
10. Hulme, *Colonial Encounters*, 14.
11. Hulme, *Colonial Encounters*, 85.
12. Hulme, *Colonial Encounters*, 86.
13. Barker, Hulme, Iversen, *Cannibalism and the Colonial World*, 2.
14. Michael Taussig, *Mimesis and Alterity. A Particular History of the Senses* (New York and London: Routledge, 1993), 65.
15. Arens, *The Man-Eating Myth*, 13.
16. See Hulme, *Colonial Encounters*, 175–222.
17. See C.L. Innes, *The Devil's Own Mirror. The Irish and Africans in Modern Literature* (Washington: Three Continents Press, 1990).
18. See Robert J.C. Young, *The Idea of British Ethnicity* (London: Blackwell, 2008), 1 and *passim*.
19. Maggie Kilgour, 'The Function of Cannibalism at the Present Time' in *Cannibalism and the Colonial World*, ed. Francis Barker, Peter Hulme, Margaret Iversen (Cambridge: Cambridge University Press, 1998), 243.
20. Edgar Rice Burroughs, *The Return of Tarzan* (New York: Del Rey, 1990), 126. In the following, references are given after the quote with the abbreviation RT.
21. Hulme, *Cannibalism and the Colonial World*, 2; and Torgovnick, *Gone Primitive*, 49–50.
22. Agamben, *Homo Sacer*, 1. See Chapter 1, above.
23. Kilgour, 'The Function of Cannibalism at the Present Time', 240.
24. On the myth of Atlantis, see Paul Jordan, *The Atlantis Syndrome* (Stroud: Sutton, 2001).
25. The recognition of a genuinely African civilisation is in fact relatively recent; only after the Second World War have scholars come to accept the fact that the 'high cultures' – a term that is problematic in itself – of Zimbabwe or Benin were genuinely brought forth by black Africans, and not imported from the Mediterreanean cultural space. See e.g. Basil Davidson, *The Lost Cities of Africa* (Boston: Little Brown, 1959); Eric R. Wolf, *Europe and the People without History* (Berkeley: University of California Press, 1982).
26. Torgovnick, *Gone Primitive*, 60.
27. Torgovnick, *Gone Primitive*, 61.
28. Torgovnick, *Gone Primitive*, 53.

29. *Miscegenation: the theory of the blending of the races, applied to the American White Man and Negro*, published anonymously, was written by D.G. Croly and G. Wakeman (London: Trübner, 1864). See Robert J.C. Young, *Colonial Desire. Hybridity in Theory, Culture and Race* (London and New York: Routledge, 1995), 144–6.
30. Young, *Colonial Desire*, 144.
31. Croly, Wakeman, *Miscegenation*, 28, quoted in Young, *Colonial Desire*, 144.
32. Young, *Colonial Desire*, 146.
33. The states of the union – at the peak, forty out of fifty – reacted to these fears by passing laws prohibiting inter-racial marriage. Only in 1967 were such laws declared unconstitutional in the United States. See Young, *Colonial Desire*, 148.
34. Conan Doyle's novel is not the first to present isolated spaces in which prehistoric creatures have been preserved. The first modern text of this kind is probably Jules Verne's *Voyage au centre de la Terre* (1864, Paris: Livre de poche, 2001), in which professor Lidenbrock and his nephew travel, via an Icelandic volcano, to the centre of the earth and observe in the large subterranean caves the battle of an ichthyosaurus with a plesiosaurus. In Cutcliffe Hyne, *The Lost Continent* (London: Hutchinson, 1900), a novel about the last days of Atlantis, the protagonist encounters mammoths and dinosaurs. However, *The Lost World* is – to my knowledge – the first novel to stage the encounter between man and an ape-like missing link, drawing on the scientific descriptions of Pithecanthropus by Haeckel and Dubois.
35. William Westall, *A Queer Race: The Story of a Strange People*. London: Cassell & Company, 1887, 128. In the following, references are given after the quote with the abbreviation QR.
36. Hulme, *Colonial Encounters*, 3.
37. Hulme, *Colonial Encounters*, 3.
38. Interestingly, one of the novels Erle gives Queen Mab to read is Wilkie Collins's *The Woman in White*, the sensation novel picked out by Susan Bernstein to illustrate 'the cultural anxiety about classifying in the face of uncertain types' (Bernstein, 'Ape Anxiety', 256). The novel's heroine, Marian Halcombe, is a hybrid figure, combining a feminine body, masculine intelligence and a dark, 'simian' face. Compared to the 'pure' and 'fair' Laura Fairlie, Marian proves to be much more resilient in the face of troubles – another example of the greater vitality of the hybrid compared to the pure.
39. R.M. Ballantyne, *Black Ivory. A Tale of Adventure among the Slaves of East Africa* (London: James Nisbet & Co, 1873), 271.
40. On the transformation of British society 'from slave trader to slave protector' see James Walvin, *Making the Black Atlantic. Britain and the African Diaspora* (London and New York: Cassell, 2000), 143 and *passim*.
41. On W.H. Hudson's life and his relations to the 'paradise lost' of South America, see David Miller, *W.H. Hudson and the Elusive Paradise* (New York: St Martin's Press, 1990); Jason Wilson, *W.H. Hudson: The Colonial's Revenge* (London: University of London Institute of Latin American Studies, 1981).
42. *Green Mansions* became an international bestseller after its American republication, with a foreword by John Galsworthy (who compared Hudson to Tolstoy), in 1916. Its popularity peaked in 1959 when it was made into a film starring Anthony Perkins and Audrey Hepburn. For an overview of

the publication and reception history, see Ian Duncan, 'Introduction' in W.H. Hudson, *Green Mansions* (Oxford and New York: Oxford University Press, 1998), vii–xxiii.

43. W.H. Hudson, *Green Mansions*. 1904. Ed. Ian Duncan (Oxford and New York: Oxford University Press, 1998), 8. In the following, references are given after the quote with the abbreviation GM.
44. Charles Darwin, *The Voyage of the Beagle*. Intr. David Quammen (Washington, D.C.: National Geographic Society, 2004), 89. In the following, references are given after the quote with the abbreviation VB.

5 Cultural Pessimism and Anthropological Anxiety

1. Arthur Conan Doyle, *The Hound of the Baskervilles*. *The Penguin Complete Sherlock Holmes* (Harmondsworth: Penguin, 1981), 712.
2. Virginia Woolf, *The Waves* (London *et al*.: Granada, 1977), 195.
3. Stories and novels set in the palaeolithic period have also been labelled anthropological romance (Leo Henkin) or paleo fiction (Björn Kurtén); see Jörg Helbig, 'Beyond the First Syllable of Recorded Time: Die Prähistorie als Handlungsschauplatz in der englischen und amerikanischen Literatur', *Anglia* 114 (1996): 1–23, 2–3.
4. Both the anthropological romance and the scientific romance were invented in the 1860s, taking up the challenge of a dramatically expanded time frame of human history required by evolution theory. See Helbig, 'Beyond the First Syllable of Recorded Time', 4. Both genres peaked in the 1880s and 1890s and again in the 1920s, responding not only to further discoveries and debates in palaeoanthropology, but also to political developments, notably the 'breakdown of civilisation' in the First World War.
5. Misia Landau, *Narratives of Human Evolution* (New Haven and London: Yale University Press, 1991), 8.
6. See Patrick Parrinder's comment that '[t]he relationship between popular fiction and scientific discourse is closer, perhaps, in the case of prehistoric science than in any other field of enquiry outside the traditional field of the humanities.' Parrinder, 'From Eden to Oedipus: Darwin, Freud, and the Romance of the Stone Age', *Anglistik* 15.1 (2004): 83–91, 83.
7. Of course, the most prominent place where the incest taboo is discussed in connection with a primeval society is Freud's *Totem und Tabu* (1912/13). Freud draws on the very same sources as do the authors of paleo fiction, e.g. the work of E.B. Tylor.
8. In prehistoric novels, gender binarism is always already in place. Although primeval women are described as more active, more muscular and hairier than Edwardian ladies, their primary role is to support their man and to offer themselves up as objects of protection: '[Eudena] was indeed a marvellous woman. [Ugh-lomi] would lie for hours watching a beast, or planning catches in that shock head of his, and she would stay beside him, with her bright eyes upon him, offering no irritating suggestions – as still as any man. A wonderful woman!' H.G. Wells, 'A Story of the Stone Age' in *The Short Stories of H.G. Wells* (London: Benn, 1948), 730–95, 762. Primeval heroes are, like Tarzan, born gentlemen even before the introduction of society, with a natural instinct to

protect the weaker – women, of course, included. The androcentric bias of palaeoanthropological representations, both fictional and scientific, persists to the present day. See Melanie G. Wiber, *Erect Men, Undulating Women. The Visual Imagery of Gender, 'Race' and Progress in Reconstructive Illustrations of Human Evolution* (Waterloo, Ontario: Wilfried Laurier University Press, 1998).

9. See Michael Hammond, 'The Expulsion of the Neanderthals from Human Ancestry', *Social Studies of Science* 12.1 (1982). As Peter J. Bowler has observed, '[t]he early twentieth century was dominated by what has been called the "presapiens" theory, according to which *Pithecanthropus* and the Neanderthals represented distinct branches of the human family tree, our own direct ancestors being a still hypothetical presapiens type which would be far more "human" where it counted, i.e. in the brain and facial structure'. Peter J. Bowler, 'Changing Conceptions of "Early Man"' in *Urmensch und Wissenschaften. Eine Bestandsaufnahme*, ed. Bernhard Kleeberg, Tillmann Walter, Fabio Crivellari (Darmstadt: Wissenschaftliche Buchgesellschaft, 2005), 47–58, 54.
10. Although William Golding created a much more positive image of the Neanderthals in his novel *The Inheritors* (San Diego and New York: Harcourt, 1955), stressing their group identity and peacefulness set against the aggressive individuality of the 'others' who are, in this case, the humans, Boule's version of Neanderthals as plump, slow and brutish is still with us. This is how Jean M. Auel describes a Neanderthal woman: 'She was just over four and a half feet tall, large boned, stocky, and bow-legged, but walked upright on strong muscular legs and flat bare feet. Her arms, long in proportion to her body, were bowed like her legs. She had a large beaky nose, a prognathous jaw jutting out like a muzzle, and no chin: Her low forehead sloped back into a long, large head, resting on a short, thick neck.' Jean M. Auel, *The Clan of the Cave Bear* (London: Hodder & Stoughton, 1980), 19.
11. Lewin, *Bones of Contention*, 66.
12. The 'conjectural paradigm' discussed by Thomas Henry Huxley, see above.
13. 'The Grisly Folk' in *The Short Stories of H.G. Wells* (London: Benn, 1948), 677–92, 677. In the following, references are given after the quote with the abbreviation GF.
14. Friedrich Engels, *The Origin of the Family, Private Property and the State. In the Light of the Researches of Lewis H. Morgan*, ed. Eleanor Burke Leacock (New York: International Publishers, 1981), 125. Original: *Der Ursprung der Familie, des Privateigentums und des Staats. Im Anschluß an Lewis H. Morgans Forschungen* (1884, rev. edn 1891; 2nd edn, Berlin: Dietz, 1974), 61.
15. The suppression of primitive communism in the palaeoanthropological romance, including 'communist sexual enjoyment', is further discussed in Parrinder, 'From Eden to Oedipus'.
16. Stanley Waterloo, *The Story of Ab. A Tale of the Time of the Cave Man* (New York: Arno Press, 1975), 65. In the following, references are given after the quote with the abbreviation SA.
17. H.G. Wells, *A Short History of the World* (Harmondsworth: Penguin, 1991), 37.
18. Propagated to wide acclaim in his *Hereditary Genius* (1869) and *Natural Inheritance* (1889), Galton's concept of eugenics was not based on genetics but on his own 'biometrics', the systematic measurement and quantification

of human features, including fingerprinting, and on traditional cattle breeding: 'Eugenicists in the early twentieth century pursued both the options that had long been explored by breeders of livestock: to eliminate what they perceived to be the negative aspects of the human race and to accentuate the positive.' Colin Tudge, *In Mendel's Footnotes. An Introduction to the Science and Technologies of Genes and Genetics from the 19th Century to the 22nd* (London: Jonathan Cape, 2000), 262.

19. Olaf Stapledon, 'The Splendid Race' in *An Olaf Stapledon Reader*, ed. Robert Crossley (Syracuse, NY: Syracuse University Press, 1997), 145.
20. Stapledon, 'The Splendid Race', 146.
21. Stapledon, 'The Splendid Race', 148.
22. On the interest in and prevailing endorsement of eugenics by modernist writers, including Shaw, Lawrence, Woolf, Eliot and Yeats, see Donald J. Childs, *Modernism and Eugenics. Woolf, Eliot, Yeats, and the Culture of Degeneration* (Cambridge: Cambridge University Press, 2001).
23. Michel Foucault, *The History of Sexuality*, transl. Robert Hurley (Harmondsworth: Penguin, 1978), 106.
24. Foucault, *History of Sexuality*, 107.
25. Foucault, *History of Sexuality*, 108.
26. Francis Galton, *Hereditary Genius. An Inquiry into its Laws and Consequences* (London: Macmillan, 1869), 375. In the following, references are given after the quote with the abbreviation HG.
27. See Freud's theory that civilisation as a whole is the result of the repression and sublimation of drives (*Das Unbehagen in der Kultur*, discussed below).
28. Charles Wicksteed Armstrong, *The Survival of the Unfittest* (London: C. W. Daniel, 1927), 74. In the following, references are given after the quote with the abbreviation SU.
29. In his crude misconstruction of the Darwinian 'struggle for survival' – which did not at all entail a direct battle of extermination between species – Adolf Hitler posited racial purity as both the ultimate goal and the foundation of civilisation, whereas he saw miscegenation between 'superior' and 'inferior' races as the greatest crime against nature: 'But such a mating contradicts Nature's will to breed life as a whole towards a higher level. The presumption for this does not lie in blending the superior with the inferior, but rather in a complete victory of the former. The stronger has to rule and he is not to amalgamate with the weaker one, that he may not sacrifice his own greatness. Only the born weakling can consider this as cruel, but at that he is only a weak and limited human being; for, if this law were not dominating, all conceivable development towards a higher level, on the part of all organically living beings, would be unthinkable for man.' Adolf Hitler, *My Struggle* (Boston, Mass.: Houghton Mifflin Company, 1939), 390. Original: *Mein Kampf*, 602nd edn (München: Zentralverlag der NSDAP, 1941), 312. Hitler was certainly, in theory and in practice, the most radical advocate of 'racial purity' and eugenics. But, as the quotations from his British contemporary Armstrong show, his was not an entirely unique position, even in an international context.
30. Agamben, *Homo Sacer*, 141.
31. I find Agamben's exegesis of modern biopolitics very thought-provoking, but also extremely problematic. On the one hand, it is plausible not to

close off the Nazi period as totally exceptional within European history, i.e. to consider it in the broader context of political sovereignty since the French Revolution. Perhaps it is also productive not to deny the continuity between current debates on the value and sacredness of life – e.g. the questions of therapeutic cloning, suicide on demand and the treatment of coma patients – and the Nazi practice of euthanasia. But, on the other hand, I would strongly insist on the difference between these two sets of issues. For example, Agamben is quite right to point to the analogy between the lethal experiments on prisoners performed at Dachau, and the rather similar research done with prisoners sentenced to death in US prisons (*Homo Sacer*, 154–159). While these cases are analogous in many points, they are not identical. By lumping together everything from Nazi victims to *coma dépassé* patients only kept alive by hightech medicine, Agamben runs the risk of erasing the differences – ethical, but also historical and political – existing between these cases.

32. Agamben, *Homo Sacer*, 142.
33. Agamben, *Homo Sacer*, 132.
34. Agamben, *Homo Sacer*, 142.
35. Grant Allen, *The British Barbarians. A Hill-Top Novel* (1895, New York: Arno Press, 1975), 143.
36. Edward Bulwer-Lytton, *The Coming Race* (Stroud: Alan Sutton, 1995), 10. In the following, references are given after the quote with the abbreviation CR.
37. H.G. Wells, *The Time Machine* in Wells, *The Science Fiction*, vol. 1 (London: Phoenix Giant, 1995), 1–70, 17. In the following, references are given after the quote with the abbreviation TM.
38. Nordau, *Degeneration*, 2.
39. Arata, 'The Occidental Tourist', 622.
40. Norbert Elias, *Über den Prozeβ der Zivilisation. Soziogenetische und psychogenetische Untersuchungen*, vol. 1 (Frankfurt a. M.: Suhrkamp, 1976), 1–2.
41. A reference to Oswald Spenglers organic concept of *Weltgeschichte* in which cultures are compared to flowers, growing, ripening and withering according to natural laws. On Spengler see below.
42. Matthew Arnold, *Culture and Anarchy* in *The Complete Prose of Matthew Arnold*, vol. 5, ed. R.H. Super (Ann Arbor: The University of Michigan Press, 1965), 91. In the following, references are given after the quote with the abbreviation CA.
43. Edward Carpenter, *Civilisation. Its Cause and Cure and Other Essays* (London: Swan Sonnenschein & Co, 1889), 2. In the following, references are given after the quote with the abbreviation CCC.
44. Robert Baden-Powell, *Scouting for Boys. A Handbook for Instruction in Good Citizenship*, ed. Elleke Boehmer (Oxford: Oxford University Press, 2004), 297–8. In the following, references are given after the quote with the abbreviation SB.
45. Oswald Spengler, *The Decline of the West*, transl. Charles Francis Atkinson, vol. 1 *Form and Actuality* (New York: Alfred A. Knopf, 1944), 32. Original: *Der Untergang des Abendlandes. Umrisse einer Morphologie der Weltgeschichte* (München: Beck, 1990), 44.

46. Spengler, *The Decline of the West*, vol. 2, *Perspectives of World-History*, 49. Original: *Der Untergang des Abendlandes*, 614.
47. Spengler, *The Decline of the West*, vol. 2, 105. Original: *Der Untergang des Abendlandes*, 681.
48. Richard Boothby, *Death and Desire. Psychoanalytic Theory in Lacan's Return to Freud* (New York and London: Routledge, 1991), 11.
49. Sigmund Freud, *The Future of an Illusion* in *Standard Edition*, vol. XXI. *The Future of an Illusion, Civilization and its Discontents and Other Works*, 5–6. Original: *Die Zukunft einer Illusion* in *Studienausgabe*, vol. 9, *Fragen der Gesellschaft. Ursprünge der Religion*, 139–40.
50. Sigmund Freud, *Civilization and its Discontents* in *Standard Edition*, vol. XXI. *The Future of an Illusion, Civilization and its Discontents and Other Works*, 75. Original: *Das Unbehagen in der Kultur* in *Studienausgabe*, vol. 9, *Fragen der Gesellschaft. Ursprünge der Religion*, 207.
51. Freud, *Civilization and its Discontents*, 86. Original: *Das Unbehagen in der Kultur*, 217.
52. Freud, *Civilization and its Discontents*, 112. Original: *Das Unbehagen in der Kultur*, 240.
53. Freud, *Civilization and its Discontents*, 112. Original: *Das Unbehagen in der Kultur*, 241.
54. Freud, *Civilization and its Discontents*, 122. Original: *Das Unbehagen in der Kultur*, 249.
55. Sigmund Freud, *Thoughts for the Times on War and Death* in *Standard Edition*, vol. XIV. *On the History of the Psycho-Analytic Movement, Papers on Metapsychology and Other Works*, 278–9. Original: *Zeitgemäßes über Krieg und Tod* in *Studienausgabe*, vol. 9, *Fragen der Gesellschaft. Ursprünge der Religion*, 38.
56. Freud, *Thoughts for the Times on War and Death*, 280. Original: *Zeitgemäßes über Krieg und Tod*, 40.
57. Freud, *Thoughts for the Times on War and Death*, 286. Original: *Zeitgemäßes über Krieg und Tod*, 45.
58. Cicely Hamilton, *Theodore Savage. A Story of the Past or the Future* (London: Leonard Parsons, 1922), 75. In the following, references are given after the quote with the abbreviation TS.
59. H.G. Wells, *The War of the Worlds* in Wells, *The Science Fiction*, vol. 1 (London: Phoenix Giant, 1995), 179–319, 255. In the following, references are given after the quote with the abbreviation WW.
60. P. Anderson Graham, *The Collapse of Homo Sapiens* (London: G.P. Putnam's Sons, 1923), 5–6. In the following, references are given after the quote with the abbreviation CHS.
61. Karel Čapek, *The War with the Newts*, transl. Ewald Osers (North Haven, Conn.: Catbird Press/UNESCO Publishing, 1999), 197. In the following, references are given after the quote with the abbreviation WN. Czech original: Karel Čapek, *Válka s mloky* (Praha: Odeon, 1989), 199.
62. On the relations between the two writers, see Julie A. Sparks, 'Shaw for the Utopians, Čapek for the Anti-Utopians', *Shaw: The Annual of George Bernard Shaw Studies* 17 (1997): 57–64.
63. Original: Čapek, *Válka s mloky*, 13.

64. Čapek also takes an almost voluptuous pleasure in polysyllabic, consonant-rich Czech names that are practically unpronounceable for foreigners.
65. The fine points of this linguistic playfulness are completely lost in translation. The Czech language has seven nominal cases and differentiates not only between three grammatical genders, but also between animate and inanimate nouns – all untranslatable into English. On the linguistic aspects of the novel, see Petr Mareš, "'Krupař Vantoch, Do You Remember?" *Válka s mloky* jako vícejazyčný text', *Naše řeč* 82 (1999): 57–64; Ladislav Matějka, 'The Registers of Čapek's Czech' in *On Karel Čapek. A Michigan Slavic Colloquium,* ed. Michael Makin and Jindřich Toman (Ann Arbor: University of Michigan Press, 1992), 51–7.
66. See Norbert M. Schmitz, 'Zwischen Aufklärung und Darwinismus. Anmerkungen zum Wandel von Wissenschaftsparadigmen und Naturdarstellung in der Moderne' in *Urmensch und Wissenschaften. Eine Bestandsaufnahme.* Ed. Bernhard Kleeberg, Tillmann Walter, Fabio Crivellari (Darmstadt: Wissenschaftliche Buchgesellschaft), 289–312, 300.
67. Original: Čapek, *Válka s mloky*, 84.
68. Original: Čapek, *Válka s mloky*, 135.
69. Julien Offray de la Mettrie, 'Les animaux plus que machines' in *Œuvres philosophiques*, vol. 2 (Hildesheim, New York: Olms, 1970), 23–80.
70. Original: Čapek, *Válka s mloky*, 137.
71. Like the Jews, the newts are a 'landless' people; and although every nation has 'its own newts', these never become fully integrated citizens. An even stronger parallel is drawn between newts and African slaves (see the description of the newts' transpacific transport which is strongly remniscent of the transatlantic slave trade, WN 130–133; *Válka s mloky*, 126–30).
72. Original: Čapek, *Válka s mloky*, 194.
73. Original: Čapek, *Válka s mloky*, 229.
74. Translation modified. Original: Čapek, *Válka s mloky*, 233.

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