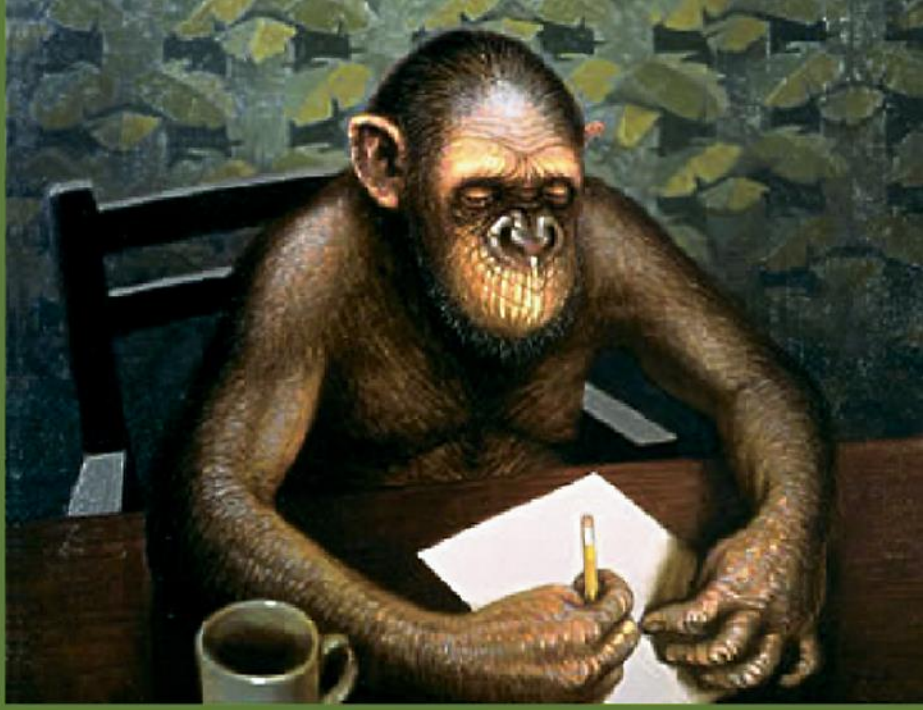

WHAT ANIMALS MEAN IN THE FICTION OF MODERNITY

Philip Armstrong

What Animals Mean in the Fiction of Modernity

'*What Animals Mean in the Fiction of Modernity* is a fresh and incisive contribution to scholarship in human–animal studies: intelligent and theoretically informed, engaging and highly readable...What *do* animals mean? The animal question is a fascinatingly important one, and Armstrong has done as much as is humanly possible to help answer it.'

Randy Malamud, *Georgia State University, USA*

What Animals Mean in the Fiction of Modernity argues that nonhuman animals, and stories about them, have always been closely bound up with the conceptual and material work of modernity.

In the first half of the book, Philip Armstrong examines the function of animals and animal representations in four classic narratives: *Robinson Crusoe*, *Gulliver's Travels*, *Frankenstein* and *Moby-Dick*. He then goes on to explore how these stories have been re-worked, in ways that reflect shifting social and environmental forces, by later novelists, including H.G. Wells, Upton Sinclair, D.H. Lawrence, Ernest Hemingway, Franz Kafka, Brigid Brophy, Bernard Malamud, Timothy Findley, Will Self, Margaret Atwood, Yann Martel and J.M. Coetzee.

What Animals Mean also introduces readers to new developments in the study of human-animal relations. It does so by attending to the significance of animals to humans, and to animals' own purposes or designs; to what animals mean to us, and to what they mean to do, and how they mean to live.

Philip Armstrong teaches at the University of Canterbury, Aotearoa, where he is Co-Director of the New Zealand Centre for Human-Animal Studies.

First published 2008
by Routledge
2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

Simultaneously published in the USA and Canada
by Routledge
270 Madison Ave, New York, NY 10016

This edition published in the Taylor & Francis e-Library, 2008.

"To purchase your own copy of this or any of Taylor & Francis or Routledge's collection of thousands of eBooks please go to www.eBookstore.tandf.co.uk."

Routledge is an imprint of the Taylor & Francis Group, an informa business

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

Library of Congress Cataloging in Publication Data
Armstrong, Philip, 1967–
What animals mean in the fiction of modernity / Philip Armstrong.
p. cm.
Includes bibliographical references and index.
1. Animals in literature. 2. English fiction—History and criticism.
3. American fiction—History and criticism. 4. Human-animal relationships in literature. 5. Animals—Social aspects. 6. Modernism (Literature)—Great Britain. 7. Modernism (Literature)—United States. I. Title.
PR830.A54A76 2008
823.009362–dc22

2007036625

ISBN 0-203-00456-6 Master e-book ISBN

ISBN 10: 0–415–35838–8 (hbk)
ISBN 10: 0–415–35839–6 (pbk)
ISBN 10: 0–203–00456–6 (ebk)

ISBN 13: 978–0–415–35838–5 (hbk)
ISBN 13: 978–0–415–35839–2 (pbk)
ISBN 13: 978–0–203–00456–2 (ebk)

Contents

	Acknowledgements	vi
	Introduction	1
1	The Inhuman Fictions of Swift and Defoe	5
2	Gulliver, Frankenstein, Moreau	49
3	Rendering the Whale	99
4	Modernism and the Hunt for Redemption	134
5	Animal Refugees in the Ruins of Modernity	170
	Notes	226
	References	235
	Index	249

5 Animal Refugees in the Ruins of Modernity

The writers central to the first four chapters of this book, despite exhibiting otherwise conflicting attitudes towards wild non-human nature, all take for granted its expansiveness and its continued existence, whether as a challenge to human enterprise or a resource for its enrichment. Crusoe on his island experiments with the enclosure of wild space in order to make it productive, but remains surrounded by an untamed nature – represented in the framing narratives about his encounters with African lions and European wolves – that constitutes both a threat and an invitation to modernity. Swift imagines a globe that includes whole populations unknown to and ignorant of Europe. In Shelley's tale, the wildernesses of the Southern Hemisphere and the Arctic North, where the Creature feels most at home, connote the limits of European modernity. *Moby-Dick* mentions, only to dismiss, the possibility that sperm whale numbers may be diminished by human hunting. As for the modernists, both Lawrence and Hemingway envisage a wild nature – if not in industrialized England or urban America, then in Australia, Mexico, Africa or the Gulf Stream – still capable of providing inexhaustible aesthetic and spiritual replenishment.

With remarkable suddenness, this faith in the boundlessness of non-human nature loses authority in the second half of the twentieth century and is replaced by ubiquitous images of a diminished and fragile world. Recent human–animal narratives concentrate on claustrophobic and denaturalized environments, within which animal life – including that of the human animal – is captive and threatened. Often the entire planet appears as an exhausted Crusoe's Island, a prison rather than a defended enclosure, at risk from nature's depletion rather than its wild superabundance, from over-cultivation rather than lack of cultivation. Alternatively the natural world becomes a Lilliput, wherein Western modernity's appetite seems as prodigiously unsustainable, its waste discharge as voluminous, its ecological footprint as destructive as that of a gargantuan Gulliver. Or, most commonly of all, writers imagine the globe as a vast scientific experiment, a worldwide workshop of filthy creation, as lethally out of control as Frankenstein's Creature.

Island, Ark and Zoo

An obvious recent example is the novel *2007* by Australian naturalist and journalist Robyn Williams. The premise of this satire is a worldwide breakdown of human–animal relations. The story opens with simultaneous acts of civil disobedience on the part of various species: forty baleen whales sink a Japanese whaling vessel, a mile-wide flock of pelicans occupies Heathrow airport, hundreds of cows invade Melbourne's Tullamarine Freeway, pythons attack a line of bulldozers poised to raze Amazon rainforest, foxes mass against a Buckinghamshire hunt (Williams 2001: 1–13). The world's pets, racehorses, farmed and zoo animals break out of their confines and, along with rebellious wild species, occupy the parks and green belts of the world's cities, which are soon densely packed with animal refugees (72–80). With global transport and communications disrupted, farming and industry compromised and business at a standstill, capitalist modernity is brought to a halt by the spontaneous agency of non-human animals.

2007 reflects a growing anxiety that the relentless expansion of modernity will inevitably create a reaction; that there is no space left for human enterprise to occupy without coming into punishing conflict with the natural world. The immediate source of this structure of feeling is the rise in environmental politics since the 1960s. As a character in Williams' novel puts it, 'all those warnings we've been pummelled with since *Silent Spring* forty-five years ago have come to be realised' (2001: 51). The allusion is to Rachel Carson's 1962 treatise on the effects of pollution. Along with the possibility of extinction by nuclear war, Carson asserts, 'the central problem of our age' is the contamination of the 'total environment' resulting from industrial-scale use of pesticides and fertilizers, testing of nuclear weaponry, and other 'new chemicals [that] come from our laboratories in an endless stream' (1962: 5–7, 8). For Carson, technological modernity constitutes 'man's war against nature' (7). In Williams' novel this perception is literalized when the human response to the animal insurrection threatens to escalate into an all-out global assault using napalm and automatic gunfire (2001: 150).

Silent Spring was followed by other influential publications, such as *The Limits to Growth*, a 1972 report that used computer modelling to predict a global crisis based on extrapolation of trends in consumption and demographics. Aiming to refocus the attention of the public from day-to-day personal concerns to 'long-term, global trends', *Limits to Growth* emphasizes the idea of a 'world system' which is 'finite', subject to 'earthly limitations', and currently in the grip of an ever-tightening 'positive feedback loop' or 'vicious circle' (Meadows *et al.* 1972: 22, 31, 86–7). The whaling industry is given as an example of 'the ultimate result of the attempt to grow forever in a limited environment' (151). At the time *Limits to Growth* appeared, the same rhetoric of environmental threat, planetary bankruptcy and refugee nature was beginning to permeate popular culture and politics. Photographs of the whole earth from space, presumably released to bolster

public faith in the achievements of science, came to function as icons of the planet's smallness and fragility.[1] The first Earth Day was held on 22 April 1970, while popular singer-songwriters – Bob Dylan, Joni Mitchell, Cat Stevens – wrote plaintive elegies for a fugitive organic world. 'Look at Mother Nature on the run in the 1970s', quavered Neil Young at the start of the decade.

In 1976, William Kotzwinkle published *Doctor Rat*, a darker and more sardonic precursor of Williams' narrative, in which a rebellion by laboratory rats heralds a global animal uprising – beginning in Chicago, birthplace of both the animal disassembly line and Ernest Hemingway – amongst dogs, zoo animals, livestock, whales, elephants, apes, big cats, rhinos, and many other species. At the end of the novel entire populations of insurgent animals are wiped out by military force, while the crisis is attributed by biologists to 'an unprecedented radiation of instinctive urge toward mass movement' (Kotzwinkle 1976: 220). Thirty years later, trying to account for the flash-mobbing animals in *2007*, Williams' main character Julian Griffin tells the U.S. Vice-President that 'all these animals . . . are perceiving the same catastrophe. The obliteration of their entire habitat' (Williams 2001: 55). Later he discovers the threat is even more literal. Senator Hector Breen, with the support of the White House, has developed a plan to eliminate all vertebrate species (excluding humans) by means of a genetically engineered virus that will make them infertile. Breen proposes

> [t]hat the cost saving to humanity would be vast – most infectious diseases gone, pastoral land freed up, no crowded species jumping from over-confined, shrinking habitats to do mischief. That the future of our civilization will be based on growing the meat and organic supplies we need in suburban factories, so farm animals will be redundant. And that from now on the idea of wild things is passé. Not only will there be nowhere for them to be wild, we will soon regard anything truly feral . . . with astonishment (156–7).

The scenarios central to both *Doctor Rat* and *2007* exemplify the late twentieth- and early twenty-first-century human–animal narrative, which insistently shows the result of modernity's manipulation of the non-human world as the global destruction of 'wild nature' itself.

The same pessimism shapes Margaret Atwood's *Oryx and Crake*. The novel opens with the narrator, Snowman, an exhausted and cynical Crusoe, apparently the only human survivor of a worldwide virus, a 'castaway of sorts' who subsists on the detritus of a ruined techno-culture (Atwood 2003: 41). He recalls his life before the virus, spent in artificially maintained compounds, where a scientific elite lives on processed food and relaxes in gardens landscaped with fake rocks (199). Meanwhile the rest of the world is contracted for consumption via cyberspace. Jimmy (the young Snowman) enjoys strategy games based on world military domination, trade in historical atrocities and classic artworks, or scenarios of species extinction (77–81).

Or else he searches for online pornography such as that provided by HottTotts, a 'global sex-trotting site' which reduces the third world to a Crusovian or Swiftian theme park catering for first world appetites. One scene shows a man with several little girls like a 'gargantuan Gulliver-in-Lilliput', a 'life-sized man shipwrecked on an island of delicious midgets' (89–90). Beyond these over-exploited social spaces, a post-natural world is descending into ruin: 'the coastal aquifers turned salty and the northern permafrost melted and the vast tundra bubbled with methane, and the drought in the midcontinental plains regions went on and on, and the Asian steppes turned to sand dunes' (24).

Williams and Atwood both produce narratives of accelerated environmental degradation, portraying a world in ruins as the legacy of the modern constitution. Two decades earlier, in the dying years of the Cold War, the same postmodern critique was often associated with the proliferation of nuclear arms. For example Bernard Malamud's *God's Grace* (1982) opens with a 'thermonuclear war between the Djanks and the Druzhkies, in consequence of which they had destroyed themselves, and, madly, all other inhabitants of the earth' (Malamud 1982: 3). Calvin Cohn, another last man alive (or so he thinks), survives because he is conducting oceanographic research in a deep-sea submersible when 'nuclear havoc' strikes (8). By suggesting that the thermonuclear war causes a worldwide deluge, Malamud is able to confine his protagonist to an island and thus draw satirically upon *Robinson Crusoe* as the ur-text of modernity, while at the same time engaging with contemporary concerns about the global destruction of habitats. Failing to learn from the grim lesson of the novel's opening *mise en scène*, Cohn attempts to repeat Crusoe's single-handed achievement of modernity by taming and 'improving' a potentially hostile nature – not in this case by domesticating goats, but by humanizing and civilizing the apes who take refuge on the island with him.

Another 1980s novel, Timothy Findley's *Not Wanted on the Voyage* (1984) also portrays an apocalyptic flood, in a narrative that explicitly revises the biblical story of Noah. Findley's reflection of environmentalist anxieties about dwindling habits is vividly expressed when a patch of high ground, shrinking as the waters rise, becomes – like the city parks in *2007* and the island in *God's Grace* – 'a haven for every kind of animal refugee in every kind of condition':

> [m]arsh animals – field animals – river animals – domestic animals – every one of them out of place – moved in. Hunters and prey; hosts and parasites; a whole variety of birds and beasts and insects – all in competition for the same food – prowled through the twilight. Every berry, every succulent leaf, every frog and every mouse was being destroyed (145).

In all these novels, then, islands (and boats) feature as the grim result of modernity rather than (as in Defoe's tale) an inviting challenge to it. They

provide the setting for extended narratives of habitat destruction, environmental degradation, and the displacement and extinction of animal life. In *Not Wanted on the Voyage*, certain whole species – dragons, faeries, unicorns and demons – are eliminated by their exclusion from the ark by Dr Noah Noyes. And when, following its launch on the waters, the vessel is visited by dolphins and whales, Noah orders their slaughter, perceiving them as 'Pirates from the Pit', representatives of an ongoing natural vitality independent of the dispensation provided by Yaweh, since they can survive his flood without relying on Noah's preservationist efforts (236–7). Meanwhile inside the ark the saved animals suffer in their impoverished environments: One Tusk the elephant develops a stomach ulcer due to the 'endless dark' of the bottom deck; Hippo wants to submerge but only gets 'a pailful of water every morning'; Rhino 'needs a dust wallow', but can find 'only bilge and wet manure' (226–7). For other species, such as sheep and cows, the ark is a feedlot, a vertically-integrated farm in which Noah's son Japeth regularly visits the lower decks to slaughter cattle for his father's dinner (292–3). 'We are truly captives here', thinks Noah's wife, including herself among the animals, 'and yet they have called this: *being saved*' (251).

More than anything else, in its dual nature as refuge and prison, a place of salvation and place of deprivation, the ark in *Not Wanted on the Voyage* embodies the paradox of the zoo – which is in fact another of those forms of contracted space commonly found in contemporary human–animal narratives. Findley's portrayal of conditions aboard Dr Noyes' vessel contrasts ironically with the contemporary deployment, by zoos themselves, of Noah's ark as an icon of their own mission. In recent decades zoos have portrayed themselves as contributors to global conservationism: providers of sanctuary for animals at risk in the wild, educators of the public in regard to biodiversity, facilitators of the study of rare species, and sponsors of breeding programmes for endangered populations. In his study of literary representation of zoos, however, Randy Malamud cites Valerie Martin's identification of 'the fallacy of captive breeding programmes': because '[h]abitats are shrinking by the minute', the animals raised in zoos can't be returned to the wild; 'there's just no place for them to go'. Hence, while according to their own self-promotion '[z]oos operated as arks, holding animals for the future . . . it was a future that would never really come' (Martin 1994: 287; cited in Malamud 1998: 45). Similarly, at the end of *Not Wanted on the Voyage*, there is no indication that the flood waters will recede, or that nature will recover from Yaweh's petulant gesture. Although a rainbow appears to signify that the rain has stopped and a dove returns with an olive branch suggesting the reappearance of land, Noah's wife knows these are tricks. The paper rainbow and dry olive twig are the same ones that Noah used in a theatrical production prior to the deluge (Findley 1984: 351–2 italics in original).

Randy Malamud argues that zoos, rather than simply failing in their self-proclaimed conservation of biodiversity, actually promulgate attitudes that undermine this goal. Zoos 'put animals on exhibit as "specimens" and

"social groups" torn from the very fabric of their ecosystems wherein they have evolved' (Fox 1990: 153; cited in Malamud, 1998: 346 note 16). Instead of daily interactions with the innumerable features of their native habitats, and with other species, zoo animals are utterly dependent on human provision for their needs. Zoos also remove (for the most part) animals' capacity for agentive resistance to interaction with humans, and subject them to constant surveillance and control. They commodify the experience of human–animal interaction, and perpetuate the belief that humans have the right to manage the natural world in both its most general and its most intimate processes (Malamud 1998: 30–2, 35–6, 43–9, 254–8). According to Malamud, the environmentalist credentials of zoos are merely an alibi for their continuing exploitation of non-human animals by global commodity culture:

> [i]n the same way that the nineteenth-century London Zoo was designed to make visitors proud of vicarious engagement in their culture's imperial prowess, today's zoos . . . condition the public to savor its participation in the thriving Western commercial culture of the late twentieth century; its privileged charge of keeping/possessing/experiencing the zoo's exotica . . . The responsibilities that, we are told, accompany our society's consumer prosperity are strikingly similar to the responsibilities that citizens in British imperial society took upon themselves . . . Zoo visits are not primarily about having fun watching animals, according to the luminary directors at the cutting edge of today's zoos . . . but about saving the planet (91–2).

Peter Høeg's *The Woman and the Ape* (1996) centres on the ambiguous function of the zoo. The novel's protagonist, Madelene, is married to Adam Burden, who with his sister Andrea works for London Zoo, a vocation they view as an enlightened response to global environmental conditions. When Madelene doubts the practice of keeping animals in captivity, Andrea tells her what a jaguar, for example, would endure 'in the swamp forests of western Brazil': three out of five die in infancy, one in two of the remainder reach sexual maturity, one in eight succeeds in mating, and '[a]fter that they die of hunger. Or thirst. If they're not eaten by other jaguars. Or gored by wart hogs' (Høeg 1996: 80). Yet the novel also emphasizes the same point made by Randy Malamud, that zoos are the legacy of British imperial history. The Burdens live in Mombasa Manor, built by parents who made their fortune as imperialists in India and British East Africa; ushering Madelene into a shed full of hunting trophies, Adam tells her that 'his parents' object had been to shoot, collect and exhibit . . . But the world had changed, now was the time to study, present and preserve' (46).

In order to clinch his bid to become director of the London Zoo, Adam has imported from the wild a specimen of a previously unknown type of great ape, closer to humans even than chimpanzees. In the course of the novel, Madelene becomes increasingly drawn to the ape, and sceptical

about the Burdens' intentions. As she fantasizes about setting the ape free, though, she realizes there is no longer any 'wild nature' to which he can return:

> [w]hat she had seen from that building at Aldgate was a city that stretched to the ends of the earth. And even though she knew that to be impossible . . . [w]hat mattered was the principle of the city – modern civilization *per se*. Madelene saw that there was no longer any end to that, it had totally enmeshed the earth. There was no longer any *outside* for the ape at her elbow. Any zoo, any game reserve, any safari park whichever was now contained within the bounds of civilization (Høeg 1996: 74 italics in original).

Madelene's vision encapsulates the postmodern perception that 'the wild', in general and at large, no longer exists, having been replaced by refuges, arks, sanctuaries, parks, reserves and zoos. The same condition is represented, albeit from the perspective of animals themselves, in *The White Bone*, Barbara Gowdy's novel about African elephants. These animals inhabit a domain pervaded by threats from human hunters and poachers of ivory, and littered with their refuse: broken machinery, traps, wire fences. The novel follows the search for the legendary Safe Place, 'a place of tranquillity and permanent green browse' beyond the reach of the hunters (Gowdy 1999: 44). As the elephants discuss their destination, however, it becomes clear that even this promised land is the product of a special dispensation from modernity. Asked whether there are no humans in the Safe Place, the old bull Torrent admits '[t]here are, but they are of a different breed entirely. Peaceful. Entranced . . . They don't covet our tusks, our feet or our flesh' (73). The calf Mud has a vision of the Safe Place as a plain that 'glints with the green of new grass' and is full of elephant cows, calves and newborns. Then the vision extends to take in a human watching harmlessly from a parked vehicle: the Safe Place is evidently a wildlife reserve (316–17).[2]

Each of the writers surveyed so far portrays a world in which animal habitats are entirely shaped by human interests, within which even 'wild' animals come and go, live or die, according to the plans of governments, multinational investors, ecology managers and eco-tourism operators. However, not all contemporary novels are so negative in their portrayal of current human–animal geographies. Like the other texts discussed above, the immensely popular *Life of Pi* by Yann Martel focuses on human–animal relations in a severely restricted setting, but from a rather different perspective. The title character recounts his survival after a ship transporting his family's zoo collection from Pondicherry to Canada sinks in the Pacific. Marooned on a lifeboat with a Bengal tiger, Pi realizes that '[i]t was not a question of him or me, but of him *and* me. We were, literally and figuratively, in the same boat. We would live – or we would die – together' (Martel 2002: 164 italics in original). By establishing a relationship with the

tiger, Pi survives 227 days until the lifeboat reaches the coast of Mexico, where he stumbles ashore while the tiger disappears into nearby jungle. Pi's conviction that he stands a better chance of survival if he can keep the tiger alive – surely a rather counter-intuitive one – is accepted by the reader because it encapsulates a dominant environmentalist structure of feeling, according to which the crucial factor in safeguarding the continuation of life in general is the preservation of inter-relationships between species.[3] As another of contemporary fiction's emblematic arks or Crusovian islands, Pi's lifeboat represents the simplest form of this vital interaction, providing an allegory of biodiversity: environmentally speaking, humans and animals are 'in the same boat'.

Examined more closely, though, the environmentalist veneer of *Life of Pi* proves rather thin. This becomes apparent in the novel's representation of zoos, and its associated theory of the distinction between humans and other animals. Far from being portrayed as a place of 'deadened sensibility' (Malamud 1998: 15) or environmental deprivation, the zoological park owned by Pi's family is idealized. According to Pi it is 'huge', 'spread over numberless acres', with an incessant 'riot of flowers', where visitors sit or walk in tranquillity (Martel 2002: 12–13). His description underemphasizes the presence of cages and barriers: instead, '[s]uddenly, amidst the tall and slim trees up ahead, you notice two giraffes quietly observing you', or else the visitor finds 'two mighty Indian rhinoceros' beyond 'a low wall' (13). On one hand the zoo is compared with a luxury hotel in which the 'guests' receive 'not only lodging but full board' and 'receive a constant flow of visitors' (13); on the other it is a place where humans can immerse themselves in the wonders of nature, a 'paradise on earth' in which the young Pi becomes 'a quiet witness to the highly mannered, manifold expressions of life that grace our planet' (14–15). Pi also rehearses the argument voiced by Andrea Burden in Høeg's novel, that captive animals are protected from the vicissitudes faced by their 'free' counterparts. 'Animals in the wild', Pi asserts, 'lead lives of compulsion and necessity within an unforgiving social hierarchy in an environment where the supply of fear is high and the supply of food low and where territory must constantly be defended and parasites forever endured' (16). Hence they are, 'in practice, free neither in space nor in time, nor in their personal relations'. On the contrary,

> [a]nimals are territorial. That is the key to their minds. Only a familiar territory will allow them to fulfil the two relentless imperatives of the wild: the avoidance of enemies and the getting of food and water. A biologically sound zoo enclosure . . . is just another territory, peculiar only in its size and in its proximity to human territory. That it is so much smaller than what it would be in nature stands to reason. Territories in the wild are large not as a matter of taste but of necessity. In a zoo, we do for animals what we have done for ourselves with houses: we bring together in a small space what in the wild is spread out (17).

Pi's account of the contracted space that typifies the condition of contemporary non-human animals – that of the zoo, the island and the enclosure – makes into virtues those very features which the other novels discussed above portray as most debilitating: constriction of movement along with control by, dependence upon, and intimate proximity to, human beings.

Of course the merest knowledge of either zoos or zoology is sufficient to discredit Pi's claims, which cannot account (among other things) for the pathologically repetitive behaviour of many confined animals, the needs of migratory species whose territories are defined not by boundaries but by vastly extensive paths of travel, the distress produced by inappropriate climatic conditions, or the other incalculable effects of removing organisms from the network of relationships that comprise their native habitats. These considerations are ignored because Martel is less concerned with the fate of animals than with advancing a particular view of the human condition, which is – despite the novel's glossy postmodern style – fundamentally that of humanist modernity. In short, *Life of Pi* presents humans as innately different from and superior to animals because they possess a greater capacity for rational inventiveness, adaptability to new circumstances, and mobility.

The novel's reclamation of the values of scientific modernity is evident in the way it echoes – with admiration, unlike the other texts discussed above – Crusoe's triumph over nature. Marooned after a shipwreck on a circumscribed terrain, fearful of wild animals, Pi survives in the same way that Crusoe does – through the application of a calculating rationality: '[r]eason is the very best tool kit' (Martel 2002: 298). He begins as his forerunner did, by taking an inventory of items salvaged from the shipwreck (145–6). He rations these with mathematical precision, while at the same time putting them to ingenious new uses. He even establishes his control over nature, like the hero of the original Robinsonnade, by 'farming', albeit for water rather than milk or meat: the solar stills, with their plastic 'udders' full of fresh water, remind Pi of 'cows grazing in a field' (188). Of course the most evidently Crusovian relationship in the story is Pi's life-preserving domination of Richard Parker, the tiger, who represents all the aspects of the savage nature that Defoe's protagonist masters: he is at once Pi's wild beast enemy, his domesticated pet and his man Friday.

The technique employed by Pi to establish his dominance over the tiger combines applied rationality with the other primary modern virtue, that of mobility. Pi trains Richard Parker by provoking the tiger to intrude on his territory and then punishing him for doing so by rocking the boat back and forth. This works, he claims, because tigers are prone to seasickness, so the animal comes to associate the human's territory with nausea and avoids intruding (Martel 2002: 202–4). In other words, Pi dominates the tiger, and therefore survives, because humans are good travellers and animals are not. The credibility of this proposition depends, of course, on the reader's agreement with Pi's earlier comments about zoos, and especially the suggestion that the 'key to [animals'] minds' is their territoriality, which is

understood as an innate acceptance – even or especially in 'nature' – of confinement to limited space.

However implausible this may be as a hypothesis about animals, its main purpose is to serve the novel's view of humanity. Martel is the son of diplomats whose family life included periods living in Quebec, Spain, Alaska, British Columbia, Costa Rica, France, Mexico and Ottawa. His perception of global mobility as fundamental to human nature is both a product of the history of modernity – as embodied by Crusoe and Gulliver, those inveterate globetrotters – and a reflection of the particular form taken by this disposition in late capitalism, which is most purely expressed by tourism. Pi's sensibility is, more than anything else, that of the tourist. His affection for zoos as embodiments of the wonder of nature, and his comparison of captive animals with hotel guests, suggest the superficial perspective of the transient visitor. Even the long digression on Pi's religious experiences reads like a tourist guidebook, for he collects faiths like souvenirs. In the same way, on his lifeboat tour of the Pacific, Pi's relinquishing of his native vegetarianism is presented less as a necessity than as an opening up to the omnivorous taste for difference that characterizes a truly modern, global disposition. Thus, although it poses as the simple story of a simple Indian boy, Martel's novel refuses the particularities of location and floats free of historical and geopolitical context, and in so doing offers a rhapsody to the power of the (touristic, all-consuming, privileged, globalized, Western) human spirit. This imperialistic and modern disposition, which applies to people, artefacts, environments and animals, is summed up in Pi's relation to the emblematic animal with whom he is marooned, a wild tiger captured for a zoo, given an English name, exported across the world, tamed like a circus animal and finally, irretrievably, lost to his native environment.

If tourism embodies the privileged disposition created by global consumer capitalism, its counterpoint is forced migration or detention, the displacement of populations, the internment of refugees. In a parallel sense, the underside of the zoo and wildlife park is the factory farm and the pound or animal shelter. The latter is the setting for J. M. Coetzee's novel *Disgrace*. The protagonist, David Lurie, leaves his university position after a scandal resulting from his sexual predation of a young student and is granted 'refuge on an indefinite basis' by his daughter, Lucy, who runs a boarding kennel on a rural smallholding (2000: 65). Despite his initial disdain for the dogs, Lurie finds himself identifying with them, especially those who are now surplus to the requirements of the new South Africa. In one scene Lucy finds him stretched out on the concrete floor of a cage beside Katy, an old bulldog bitch: tickling the dog behind the ears, he murmurs: '[a]bandoned, are we?' (78). Bereft of any meaningful occupation, Lurie helps out Lucy's friend Bev Shaw at her crowded animal clinic. This mostly involves euthanizing unwanted dogs. Coming from the nearby shanty-town, these animals are the organic surplus of colonial modernity, suffering from a range of ailments, 'but most of all from their own fertility' (142); their superfluity contrasts with the social function of the dogs Lucy

cares for: 'Dobermanns, German Shepherds, ridgebacks, bull terriers, Rottweilers. "Watchdogs, all of them . . . [w]orking dogs"' (61). Nevertheless, both classes of dogs live or die according to their ability to serve the social pattern, the distribution of security-protected wealth and over-fertile poverty in turn-of-the-millennium South Africa. The fate of Bev Shaw's animals is associated with that of a human underclass by a literary allusion that occurs to Lurie: '[t]he dogs are brought to the clinic because they are unwanted: *because we are too menny*' (146: italics in original). The phrase comes from Thomas Hardy's *Jude the Obscure*, from the note left by Jude's eldest child when he hangs himself and his siblings, believing this sacrifice will free his parents from the increasingly difficult task of providing for them. Coetzee thus links his novel with Hardy's, which documents the process by which, as a result of nineteenth-century industrialization, the rural working class became disposable, indeed became an unwanted human surplus.

A comparison can thus be drawn between the animal shelter, as a site to which the organic residue of colonial history is consigned, and Nicholas Mirzoeff's description of the internment camp as the defining spatial technology of global late capitalism. For Mirzoeff, the function of 'the empire of camps' is 'to maintain low-waged manufacturing workers in their place in the global marketplace and reduce the social welfare costs of the advanced nations to the lowest possible point' while at the same time 'continuing to permit the instant, electronic nomadism of capital' (2002: 12). In the same way, the nomadism of animal capital – the global import and export of livestock, pet animals and zoo animals – is encapsulated by the zoological 'cargo' carried by the vessels in *Life of Pi* and *Not Wanted on the Voyage* (Martel 2002: 100; Findley 1984: 210–11), while its necessary converse is the forced disappearance of unwanted animals. In Findley's novel the latter effect is represented by the elimination of all animals forbidden a place on the ark: they perish either in the rising flood or in the great fire set by Noah as the ultimate sacrifice to his God (1984: 124–8). Findley draws on images of cattle pyres from the 1967 and 1981 outbreaks of Foot and Mouth disease in Britain, as well as anticipating media imagery from 2005 showing bonfires of live chickens in response to the avian influenza scare.[4] Such practices also manifest the attempt to control the mobility of non-human agents – in this case, viruses – while preserving the global mobility of agricultural capital. As Findley's novel suggests, the threat posed by non-human mobility may occur at the level of the individual animal (like the cat Mottyl who is smuggled aboard and breeds both kittens and sedition), the species (like the pair of demons, who take part in the uprising and are consequently thrown overboard), or at the viral or genetic level (like the rogue gene in Noah's family that produces ape-children, who are also thrown overboard).

The tension identified by Mirzoeff, created by globalization's need to maintain the nomadism of capital while restricting the movement of rogue populations, can also be shown at work by contrasting the novels of Martel

and Coetzee. *Life of Pi* celebrates a touristic globetrotting sensibility, possessing worldwide visiting rights to a zoo-like world of (contentedly) imprisoned wild nature; *Disgrace* concentrates on the elimination of unwanted animals behind the 'closed and locked' doors of the animal shelter (Coetzee 2000: 142). As in Mirzoeff's account of the relation between global capital and the internment camp, these spaces cannot be understood separately. The expanding populations of unwanted animals – homeless pets, infected livestock, feral pests, or inconveniently placed wild species – are the by-products of those modes of animal consumption that define modernity: the enclosure of ever-greater areas of land for animal farming, the trade in pets, the eco-touristic taste for encounters with wild species. And thus the principle of organized containment is applied even to the populations of so-called wild species: whales, seals, elephants, wolves, bears, all are culled when their numbers begin to overflow the space allotted to them within the current geo-economic pattern. Indeed the oxymoronic phrase 'protected wild animal' sums up the tension identified by Mirzoeff, between global capitalism's demand for certain kinds of mobility and certain kinds of restriction, as they pertain to the non-human world.

Sacrificial Tables

Under modernity, all the human structures that circumscribe animal life – farms, zoological parks, slaughterhouses, fisheries, nature reserves – become sites for scientific manipulation. Hence, while like Crusoe's island they are spaces of refuge, the ship and the island in *God's Grace*, the ark in *Not Wanted on the Voyage*, London Zoo in *The Woman and the Ape*, the compounds in *Oryx and Crake*, the zoo and lifeboat in *Life of Pi*, even the animal shelter and kennels in *Disgrace*, are also Frankensteinian workshops. They are spaces created by and for the purpose of experimentation with the organic world.

Indeed the image of the entire globe as a post-natural, technologically saturated laboratory-at-large is a pervasive one in contemporary fiction. In *The Memoirs of Elizabeth Frankenstein*, which recasts Shelley's story from the perspective of Victor's bride, Theodor Roszak envisages the legacy of Frankenstein's experiment in just these terms. At the novel's conclusion Elizabeth awaits the arrival of the Creature who will kill her, and records a vision in which 'made things', the Creature's offspring, 'inherit the world' and 'devour the earth' (1995: 418). Similarly, in *2007*, Hector Breen presents his plan to eliminate animal life as the logical endpoint of modernity, the 'destiny' provided by 'the greatest, most powerful technology the world has ever seen' (Williams 2001: 219). He aims to recreate the planet as a co-ordinated productive system in the service of human needs, without pests, zoonotic diseases or livestock-produced greenhouse gases; without unscientifically 'sentimental' attachment to either domestic pets or untamed nature; without ferity or wildness of any kind (217). Such visions evoke what Horkheimer and Adorno in 1944 described as the 'totalitarian' legacy

of the Enlightenment's 'dissolvent rationality', according to which animals would soon be 'completely eradicated', since, although formerly their 'irrationality' was needed as 'proof of human dignity', the triumph of techno-culture means that '[t]he earth, now rational, no longer feels the need of an aesthetic reflection' (1973: 6, 245, 251).

The common antipathy of literary fiction to techno-scientific thought and practice is best understood according to Latour's distinction between 'the sciences' and 'Science'. The former term, he suggests, refers to the multiplicity of theories and activities actually formulated and practised by scientists, which comprises a constantly changing, non-unified and non-totalizing network of propositions pertaining to 'the plurality of external realities'. The latter term, capitalized and singular, represents a reified and unified 'myth' that conceals how partial, provisional and contested the sciences actually are: 'Science' therefore gains social authority by claiming unique access to a unified Nature. Latour suggests a quasi-religious authority is arrogated by the Scientist, who assumes the prerogative to commune with the objective world of nature and to return to the subjective world of society 'like a latter-day Moses', bringing back 'the legislation of scientific laws, which are not open to question' (2004: 9–11, 249).

Bernard Malamud and Timothy Findley also associate the totalizing tendencies of Science with Judaeo-Christian monotheism. In Malamud's novel God is a detached and incompetent technocrat: in a brief exchange with Cohn he describes the latter's survival of the global devastation as a 'minuscule' but 'embarrassing' error (Malamud 1982: 3–4). Similarly, in *Not Wanted on the Voyage*, Yaweh indicates his plans to obliterate creation by speculating that 'the Great Experiment approaches its end' (Findley 1984: 89). And just like Latour's Scientist, Noah claims the prerogative of being Yaweh's spokesman and legislator, conferring with him alone before delivering edicts to his family.[5] He calls himself 'Doctor Noyes' – his wife wonders whether his title means 'experiments or divinity?' (266) – and undertakes research in his arbour, which is 'an alchemist's study, a theatre of magic and a laboratory' (18–19). Noah's procedures range from vivisection to conjuring, the latter exemplified by making a coin disappear beneath a bottle as it fills with water, which gives Yaweh the idea for the Flood in the first place (95–6). Noah's favourite subjects for biological investigation are kittens stolen from Mrs Noyes' cat Mottyl, who has been blinded in a previous experiment (18–19). Although the exact nature of this research is not revealed, Noah's interest in the rarer breeds of kitten suggests a concern with genetics (207). Later he dictates to his daughter-in-law Hannah 'his theories on *The Art of True Alchemy* or *The Anatomy of Quadrupeds*, in which he further explored the uses of zinc on the one hand, and the possibility of crossing a sheep with a goat on the other' (233).

With his theories about hybridization of both animal and mineral matter,[6] Doctor Noyes shares the abiding interest shown by the modern sciences in the creation of new products through combination. Like Frankenstein, however, he finds these alchemies sometimes produce dangerous reactions.

His imaginary immunity to the volatile flux of the interacting elements he manipulates is constantly transgressed. When he conducts a brutal gynaecological experiment on his other daughter-in-law, Emma, surgically opening her vagina with the horn of the still-living Unicorn in order that she can 'receive' her husband (264–6), this travesty of the myth of the unicorn caught by a virgin, an act of rape and forced bestiality, violates the human–animal distinction that Noah is obsessively determined to maintain. His own vulnerability to such intermixtures is also apparent when it is revealed that his son Japeth was born with an ape-like twin, whom Noah ordered destroyed at birth (162–5). Accordingly it is to Japeth that Noah assigns the task of killing another ape-child, Lotte, when Mrs Noyes contravenes Yaweh's instructions by saving her from the flood. Unaware of his own congenital proximity to such beings, Japeth 'think[s] it strange that so much fuss was being made' after he dispatches Lotte: '[a]fter all – he'd only killed an ape' (170). The satire is sharpened by the implied reference to the Christian tradition that makes Japheth the ancestor of Europeans, and by Findley's omission of the middle 'h' from his name. Furthermore, despite the old man's claims to the contrary, Findley makes clear that the simian taint in the family's bloodline comes from Noah rather than his wife. After the patriarch impregnates Hannah she also gives birth to an ape-child, who is immediately cast overboard (341–2, 349; Tiffin 2001: 36–7).

Findley's novel suggests that the metaphysics of religion and of Science (in Latour's second sense) alike are predicated on the sacrifice of living beings in the name of theoretical or theological abstraction. The death of the unicorn as a result of Noah's 'experiment' on Emma is immediately incorporated into his liturgical repertoire, a parody of the mutual reliance of Science and religion upon arcane vocabularies, accoutrements, locations and rites (Findley 1984: 271–3). The association between liturgical and experimental killing of animals has long been apparent in the use of the term 'sacrifice' to describe the death of an animal as the consequence of laboratory research.[7] As Lansbury argues, increasing use of this idiom by physiologists after 1900 reflects the transfer of authority and mystique from organized religion to professional science. 'The altar was translated into the operating table', she writes, where the researcher or surgeon presided over the mysteries of life and death (1985: 165). It is this aura of power that Findley challenges by showing the sacrificial order from the perspective of the sacrificed. Near the start of the novel Noah decides to punish his son Ham for the boy's inappropriate affection for non-human nature by insisting that he wield the knife in the sacrifice of a lamb:

> Ham took his father's place and held the lamb. He held it very tight against this diaphragm . . . He spoke to it – with his eyes closed . . .
>
> A shining moon-shaped wound had sprouted on his arm where the arm had pressed against the lamb – and the blood that flowed into Noah's basin was as much his son's as it was the slaughtered beast's (26–7).

Unable to refuse his father's command, Ham subverts it. By showing compassion for the lamb, by embracing and speaking to it, Ham elides the emotional distance that is supposed to separate the Scientist and priest from the objects of their rites. By cutting his own flesh with the same stroke that kills the animal, Ham turns the sacrifice back on its perpetrator. And by mingling his own blood with that of the lamb, Noah's middle son (whose name of course is a homonym for a type of meat) signifies a fundamental consubstantiality between human and animal which inverts the conventional meaning of the sacrifice (Tiffin 2005: 14).

This scene also repeats a moment that reappears throughout the narratives of Swift, Shelley and Wells: that of the vivisector vivisected. In *God's Grace*, a similar reversal is enacted. As a central part of his experiment in humanizing the apes who share his island, Calvin Cohn delivers a lesson on the meaning of sacrifice. He tells the story of Abraham and Isaac to Buz, his first chimp companion. Commanded by God to sacrifice his son as a sign of piety, Abraham is about to plunge in the knife when God intervenes. 'So Isaac's life was saved', Cohn concludes, 'and a ram caught by his horns in a thicket was substituted as the burnt offering, in that way affirming the idea of an animal in place of human sacrifice'. He draws an anthropological lesson from the story, which 'was probably a protest against the pagan sacrifice of human beings', and so an example of 'man humanizing himself'. To which Buz responds, 'Do you call murdering onimols a civilized oct?' (Malamud 1982: 73). At the end of the novel, once Buz has usurped Cohn's position as leader of the surviving primates, he orders him to be sacrificed. 'Where's this ram in the thicket?' Cohn asks 'with a bleat' as he is about to be killed, failing to understand that the metaphysical order that guaranteed human separation from and dominion over animals has been revised (222).

Coetzee's *Disgrace* also concludes with an instance of animal sacrifice. The scene is the animal shelter, where David Lurie is assisting Bev Shaw in her routine euthanasia of unwanted dogs. 'Was that the last?', she asks, and he replies that there is one more (Coetzee 2000: 220). He is referring to Driepoot, the three-legged dog who has attached himself to Lurie, frisking around the yard or snoozing at the feet of the aging, disgraced ex-academic while he sits in the sun. Despite Lurie's 'particular fondness' for this animal, and his awareness of 'a generous affection streaming out toward him from the dog', he chooses not to save the animal from the needle (214–15). Instead he opens the cage door to take Driepoot to the operating table.

> 'Come', he says, bends, opens his arms. The dog wags its crippled rear, sniffs his face, licks his cheeks, his lips, his ears. He does nothing to stop it. 'Come'.
>
> Bearing him in his arms like a lamb, he re-enters the surgery. 'I thought you would save him for another week', says Bev Shaw. 'Are you giving him up?'
>
> 'Yes, I am giving him up' (220).

As the conclusion to Lurie's awakening to the suffering of other lives, which has been facilitated by his growing compassion for animals, this final scene is hard to read: it is both emotionally difficult and difficult to make sense of.[8] The language and gestures of sacrifice are certainly present. The description of Lurie's hold on the animal, comparable with Ham's in *Not Wanted*, also echoes a familiar idiom – 'like a lamb to the slaughter' – that links the act of euthanasia to the metaphysics of Judaeo-Christian sacrifice.[9]

By this point Coetzee's reader should be especially alert to animal figures of speech, since the novel is densely crowded with them. Earlier, Lurie has thought of himself as a snake, a butterfly, a dog, a predator intruding on a vixen's nest, a fox with a rabbit in its jaws, a viper, a 'shark among the little fishes', a 'strange beast' cornered by hunters, and of course the ultimate sacrificial animal, the scapegoat (Coetzee 2000: 2–3, 5, 9, 10, 25, 38, 53, 56, 91; Nyman 2003: 139). Yet in the context of the first part of the narrative, as expressions of Lurie's abstract, detached temperament, these figures are dead metaphors. The animals in each case are invoked only for their emblematic meaning, as Lurie has no interest in animal life itself. The turn comes after his exile from the university, a realm of ideas, to the countryside, where non-human life is an unavoidable corporeal presence. Once Lurie arrives at Lucy's home they both begin to inhabit, and so bring back to life, the kinds of dead metaphors he once used so easily. Lucy finds her father resting inside a cage with the unwanted bitch Katy: literally and metaphorically he is 'in the doghouse'. When Lucy is brutally raped, but decides to remain where she is under the patronage of her neighbour, Petrus, whom she knows to have been complicit in the attack, she responds to Lurie's objections by saying, '[y]es, I agree, it is humiliating. But perhaps that is a good point to start from again . . . at ground level. With nothing . . . No cards, no weapons, no property, no rights, no dignity'. 'Like a dog', replies her father. 'Yes', she agrees, 'like a dog' (205). By now the novel has taught the reader to accord this kind of simile a full range of meanings from the literal to the emblematic. Father and daughter are living out this identification with the animal that (among its wide range of meanings) stands for degradation and low materiality. Lurie's work for the animal shelter, disposing of the carcasses of unwanted dogs, brings home not only the full implications of his disgrace, but also the inescapability of the animal body, human and non-human, while Lucy's life, too, has become inextricably tied up with that of the dogs she looks after, most of whom were shot and killed during the attack on her home. This ethical acceptance of responsibility for the realities of deprivation contrasts with modernity's obliviousness to the material residue – whether it be a surplus of labour or of domestic animals – produced by privilege:

> [w]hen people bring a dog in they do not say straight out, 'I have brought you this dog to kill', but that is what is expected: that they will dispose of it, make it disappear, dispatch it to oblivion. What is being

> asked for is, in fact, *Lösung* (German always to hand with an appropriate blank abstraction): sublimation, as alcohol is sublimed from water, leaving no residue, no aftertaste (142).

The surgery, operating table and needle, and the hospital incinerator to which Lurie delivers the corpses, provide the technological apparatus for the kind of sacrifice at work here: a secular ritual that borrows its metaphysics from the Christian Neoplatonic division between spirit and matter; an unscientific application of the paraphernalia of medicine. Here, then, is the wider application of the theologico-scientific rite of animal sacrifice: the removal of the inconvenient, unprofitable, suffering animal surplus produced by human social organization by rendering it immaterial, dispersing it into ether and smoke.

Taking these dimensions of the novel into account, there are two ways in which its final scene can be interpreted. The first would be to conclude that what Lurie is really giving up when he offers Driepoot for euthanasia is the prerogative of maintaining a privileged category of saved animals, whose existence is permitted only insofar as it is encompassed by the property rights which underlie contemporary capitalist societies. This reading is reinforced by Lurie's determined refusal of ownership: the dog 'is not "his" in any sense; he has been careful not to give it a name (though Bev Shaw refers to it as *Driepoot*)'; the affection between man and dog arises because '[a]rbitrarily, unconditionally, he has been adopted' by the animal, rather than the other way round (Coetzee 2000: 215). Giving up ownership rights to this dog in particular, in favour of relieving the suffering of unwanted dogs in general, is perhaps Lurie's version of starting again, with nothing, 'like a dog' himself: '[c]urious that a man as selfish as he should be offering himself to the service of dead dogs' (146). An alternative reading would take Lurie's sacrifice of Driepoot as a sign of his failure to step out of those metaphysics of sacrifice with which he has been struggling throughout the novel. According to this perspective, Lurie at the end of Coetzee's novel remains caught within the structure of humanism, as expressed by its characteristic treatment of non-human life, because ultimately he cannot bring himself to '*sacrifice sacrifice*' (Derrida 1991: 113; italics in original). The final reduction of Driepoot to a mere symbolic presence, a sacrificial token – 'like a lamb to the slaughter' – rather than an individual dog, repeats the earlier tendency to treat animals in the abstract or turn them into metaphors and thus surrenders to the anthropocentric metaphysics of *Lösung*.

The modern disposition that regards living things as abstractions – commodities, capital, raw material, objects of study – is also the target of Margaret Atwood's *Oryx and Crake*. In that novel, a scientifically advanced capitalism remakes the world by means of technological innovations abstracted from their material consequences. The instrumentalist cast of thought is most apparent in Jimmy's friend Crake, a scientific prodigy employed by the most prestigious of the biogenic corporations, whose pathological objectivism allows him to watch on the internet, without any

apparent moral or emotional reaction, as sex tourists abuse third-world children on HottTotts, executioners behead prisoners on hedsoff.com, and frogs are crushed to death or cats torn apart by hand on animal snuff sites (82–3). The same cool detachment leads him to conclude that the human species is a biological dead end, to destroy it by means of the JUVE killer virus, and, like a latter-day Frankenstein or Moreau, to engineer a new humanity. Crake's anthropocidal virus is only one of a number of lethal, global-scale final solutions portrayed in contemporary human–animal fictions: Hector Breen's 'faunicide' in *2007*, the thermonuclear war in *God's Grace*, Yaweh's decision to drown his 'great experiment' in *Not Wanted on the Voyage*. These visions of a grand apocalypse, conceived in scientific rather than religious terms, derive from the crises of mid- and late-twentieth-century modernity, the various genocides and biocides that brought into disrepute its promise of endless advancement through technological innovation: [10] the concentration camps of the Third Reich, the Hiroshima and Nagasaki atomic bombs, the Cold War policy of mutually assured destruction, the growing evidence of environmental degradation and species extinction. Such phenomena suggest the bringing to lethal perfection of modernity's great experiment in manipulation of the biological world, an experiment anticipated in Crusoe's enclosures and Gulliver's importation and breeding of new livestock species.

The interconnections between various atomic-age technologies designed to organize human and non-human lives on a global scale are reflected in literary fiction as early as 1953, in Brigid Brophy's *Hackenfeller's Ape*. The story centres on a member of the rare (fictional) primate species of the title, who is being studied along with his mate in a zoo enclosure by Professor Darrelhyde, until the military decides to send the ape into orbit in a rocket as part of the space-race between the Soviet bloc and the Western allies. Of course from the 1940s onwards, a number of non-human primates were actually fired in the direction of outer space, and their survival rate was extremely low (Haraway 1991: 136–40). Attempting to save 'his' ape from such a fate, Darrelhyde appeals to the head of the League for the Prevention of Unkind Practices to Animals, who assures him that 'Percy is being sacrificed in a good cause' (Brophy 1953: 65), because the rocket experiments will lead to space stations allowing the allies to spy on 'the Ruskie' from space, 'like the eye of God, seeing everything he does, with his industrial areas and his centres of population wide open to us' (66). Brophy's satire thus suggests a structural link between the biological ordering of non-human animals – into lists of laboratory subjects sacrificed, taxonomic categories, reproductive statistics, habitat fields, research stations and zoological parks – and the administration of human space by the military-industrial complex. The Professor's superior, 'the Co-ordinator for Scientific Studies', suggests that as a result of the arms and space races, '[w]ar will soon be as unthinkable as hunting for one's food', because just as hunting has been replaced by the abattoir, 'open war is already being replaced by the concentration camp and the extermination chamber' (45, 52).

Here Brophy touches on the most controversial expression of a link between the wholesale exploitation of animals and the large-scale extermination of human beings: comparison between the Holocaust and the industrial farming of animals. Although this comparison is commonly used by animal rights campaigners and is consistent with the scenarios I have discussed so far, amongst the novelists discussed here, only Brophy and Coetzee address it directly, and only the latter in any detail. During his Princeton University Tanner Lectures in 1997–8, Coetzee presented two short fictions in which a novelist, Elizabeth Costello, addresses an academic audience on the topic of human–animal relations. The first of these, 'The Philosophers and the Animals', is structured by the comparison between the concentration camps and the industrial processing of animals (Coetzee 2003: 65). Not surprisingly, Costello's arguments offend some in her audience, not least a poet called Abraham Stern, who asserts that the link between 'the murdered Jews of Europe and slaughtered cattle' is 'a trick with words which I will not accept', an 'inversion' that 'insults the memory of the dead' and 'trades on the horrors of the camps in a cheap way' (94).

As this reaction demonstrates, the comparison between the Nazi concentration camps and the industrial animal farming and slaughter of animals tends to serve both the memory of the Shoah and the cause of animal advocacy poorly, insofar as it claims identity between two injustices that are, in human terms – that is in their social, cultural, economic and political causes, and in their intentions, meanings and consequences – far more different than they are alike. Yet the comparison persists,[11] perhaps arising from an imperfectly recognized sense that significant historical and technological links undoubtedly exist between its terms. 'Chicago showed us the way', states Elizabeth Costello; 'it was from the Chicago stockyards that the Nazis learned how to process bodies' (Coetzee 2003: 97). Her claim is a valid one, as Charles Patterson demonstrates. Chicago's Union Stockyards taught the rudiments of assembly-line manufacture to Henry Ford, whose influence on Hitler was considerable; while Himmler organized the death camps by drawing both on his own training in stock breeding and agricultural technologies, and on lessons drawn from American factory farming and genetic science (Patterson 2002: 57–79, 100–3). Nor did the application of industrial techniques to the internment and transport of human beings cease with the Third Reich. On the contrary, as Nicholas Mirzoeff argues, the contemporary 'empire of camps' – including the American base at Guantanamo Bay, the prisoner-of-war facilities in Iraq, and Australia's detention centres for illegal migrants – 'derives its technology from the concentration camps of the Nazi regime, the Gulag Archipelago and the Alien Internment camps of World War II' (2002: 12).

All of which explains why recent and contemporary novelists identify modernity with those technologies of spatial organization – from factory farms to concentration camps, from information systems to genetic engineering, from industrial-scale pesticides to nuclear armaments – which are designed to subject living populations, both human and non-human, to

wholesale displacement, forced migration, large-scale incarceration, global surveillance, generalized control or mass extermination. The resulting portrayal of human–animal relations insistently recalls Swift's insight that rational instrumentalism can turn as easily upon humans as upon non-human animals – expressed in his case by linking British proposals to castrate or exterminate the Irish with the Houyhnhnms' plans to eliminate their own pests, the Yahoos.

Beastly Places

In much contemporary fiction, then, so-called wild nature is irremediably lost, or else subsumed into the manipulated and artificial spaces of the Crusovian enclosure or the Frankensteinian workshop. The wild beasts feared by Crusoe and revalued by the modernists are captured, domesticated, neutered; their fangs are drawn and their claws clipped. Martel's tiger becomes a circus performer (2002: 165); Atwood's scientists use wolf genes to create the ultimate guard dog (2003: 205); the ferocious bears in Findley's novel are so dispirited by captivity they lay their heads in Mrs Noyes' lap (1984: 233–4). As the history of modernity shows, however, the attempt to eradicate, regulate, commodify or otherwise manipulate wildness tends to result in ferity – the return of wildness, or an escape back to it, or its redirection into unexpected modes.

This reaction occurs with particular force in urban settings. The city has conventionally been understood as the ultimate expression of modernity's triumph over nature, purporting to replace human dependence on the organic environment with artificially constructed utilities providing unlimited food, water, shelter and warmth. It is also the space in which animals are thought to be subject to the most stringent control. Urban animals earn their place through their commodity value as pets, workers or exhibits in urban zoos, or else they are categorized as pests and so liable to extermination. Anthropologist Annabelle Sabloff asserts that during her research on perceptions of nature amongst city-dwellers, she was repeatedly told that '[u]rban life is inimical to nature'. And yet, as the points out, '[c]ities teem with animal . . . presence'. 'Family and feral dogs and cats roam every neighbourhood', while '[m]any species are attracted to the city precisely because of the cityscape itself': scavengers like rats and raccoons 'seek out household garbage cans, fast-food waste bins, and city dumps'; birds and bats colonize 'attics, wall cavities, hanging flowerpots, and high-rise ledges'; while a host of insects, earthworms, birds and reptiles 'are attracted by the hidden world of gardens tucked in behind countless houses' (2001: 5).[12]

In the same way, novelists challenge the illusion that the city is a zone free of both animals and their agency. In *Life of Pi* the title character asserts that '[i]f you took the city of Tokyo and turned it upside down and shook it, you'd be amazed at all the animals that would fall out: badgers, wolves, boa constrictors, Komodo dragons, crocodiles, ostriches, baboons, capybaras, wild boars, leopards, manatees, ruminants in untold numbers' (Martel

2002: 297). Similarly, in *The Woman and the Ape*, Andrea Burden describes to Madelene the scale of the non-human animal population of London. She enumerates the city's populations of working and pet animals, along with those in industrial farms, entertainment and laboratories, and then cites the innumerable 'animal lumpenproletariat of the city', the strays and 'semi-wild animals which strive to adapt to the city biotope', concluding that 'there is a greater incidence of animal life here than, for example Mato Grosso in the dry season. London is one of *the* largest habitats for non-human creatures on earth' (Høeg 1996: 67–8 italics in original).

Andrea cites this teeming urban animal presence to justify the further extension of modernity's project of studying and administering the organic world. For Madelene, however, the animal citizenry – especially the mode of illicit, non-human, feral inhabitation of the city practised by stray and 'semi-wild' animals – demonstrates the possibility of subverting the 'principle of the city – modern civilization *per se*'. Recognizing that the urban paradigm has 'totally enmeshed the earth', Madelene concludes that '[t]here's no such thing as *outside* now . . . If there's any freedom to be found it'll have to be on the inside' (Høeg 1996: 74–5 italics in original). Accordingly, when she escapes with the ape Erasmus, their route through London transgresses the human-organized modes of transport, following what Steve Baker describes as 'a non-human, *non-pedestrian* movement', a 'line of flight' (2000: 21, 118 italics in original).[13] Ignoring roads, pavements and tube trains, they hide in treetops, scale drainpipes and fire-escapes, and climb 'another storey to a heart-stoppingly haphazard network of flag-poles, cornices and balustrades. Then further up still, to the lowest unbroken run of rooftops in London'. By slipping into a kind of 'beastly place', a feral animal dimension excluded from anthropocentric configuration of the city, the escapees remain invisible to its human inhabitants.[14] 'No one noticed them. This progress of theirs was not just a journey through space, it also constituted a passage through the civilized consciousness' (Høeg 1996: 139–40).

The refugees eventually find sanctuary in St Francis Forest. Yet even this apparently natural location is encompassed and shaped by modernity. Originally established in the seventeenth century as 'an attempt to recreate the Garden of Eden' by the first Duke of Bedford, who conceived it as 'a horticultural machine designed to seize the awareness of the visitor and turn his thoughts to God', the forest epitomizes the combined metaphysics of Christianity and Science (Høeg 1996: 156). After many changes of ownership it is purchased by the Royal Zoological Society in 1970 and redeveloped as a game reserve, becoming the first breeding ground outside their native territories of the mountain gorilla, the Siberian tiger and the Australian penduline owl (157–8). However, throughout this history, St Francis Forest demonstrates vividly the potential recalcitrance of non-human environments, embodying Madelene's vision of freedom 'on the inside' of 'modern civilization *per se*'. Its founder is eaten by his imported lions while attempting to reproduce the Biblical scene of harmony between predator and prey (156–7). Over subsequent centuries the forest manifests

such a profusion of resistances to human control – 'floods, droughts, lightning bolts, forest fires, outbreaks of Dutch elm disease, fire blight, attacks of Red Admiral caterpillars and heart-rot fungus' – that 'its owners had found it impossible to recruit workers locally'. Echoing Lawrence's description of Las Chivas in *St Mawr*, Høeg imagines the forest as a network of natural agencies 'so intractable . . . that some inexplicable form of geographical and biological anarchy appeared to reign there'. As such, St Francis Forest recalls the behemoth of medieval bestiaries, or perhaps Moby Dick: '[i]t was as though the land itself were an enormous creature, a buried whale which, when folks scratched its back, shook itself to throw them off' (157). Even the success of breeding programmes cannot be attributed to human mastery: 'St Francis Forest was one of the first research centres to have been arranged according to the modern-day acceptance of the fact that the more animals are left to themselves the better they will thrive' (158).

Høeg touches on a contentious issue within the politics of environmentalism itself. The growing authority of the environmental movement has recently been accompanied by an emerging critique of ecological managerialism – the governmental, bureaucratic and corporate response to public alarm about climate change, ecosystemic degradation, habitat loss and species extinction.[15] Such official measures are more often than not treated with suspicion by the novelists under discussion here, who portray them as reproducing – albeit in a new rhetorical guise – the same human, and especially scientific, intention to master nature that drove industrial capitalism and led to the current environmental crisis in the first place. In this way, contemporary human–animal fictions agree with sociologists of science such as Latour, who suggests that political ecology, despite claiming 'to protect nature and shelter it from mankind', most often involves humans in nature 'in a finer, more intimate fashion and with a still more invasive scientific apparatus' (2004: 20). Unflattering portraits of environmental management can be seen in Calvin Cohn's doomed attempts to manage interrelationships amongst his island's various primate species, Noah Noyes' brutal administration of his animal captives, and Andrea and Adam Burden's commitment to the scientific mission of London Zoo. Meanwhile, Coetzee's Elizabeth Costello attacks 'the ecological vision', according to which 'the salmon and the river weeds and the water insects interact in a great, complex dance with the earth and the weather'. For Costello, such a vision is complicit in the same Platonism that shaped both Cartesian modernity and modernist primitivism, since '[o]ur eye is on the creature itself, but our mind is on the system of interactions of which it is the earthly, material embodiment'. Believing that only '[w]e, the managers of the ecology . . . understand the greater dance' allows us to assume the right to 'decide how many trout may be fished or how many jaguar may be trapped' (Coetzee 2003: 98–9).

'Animals', however, 'are not believers in ecology', Costello adds (Coetzee 2003: 99) – an assertion amply borne out by the feral behaviour of both species populations and individuals. Suggesting that '[w]e had a war once

against the animals', which we won 'definitively only a few hundred years ago when we invented guns', she suggests that

> there are still animals we hate. Rats, for instance. Rats haven't surrendered. They fight back. They form themselves into underground units in our sewers. They aren't winning, but they aren't losing either. To say nothing of the insects and the microbia. They may beat us yet. They will certainly outlast us (Coetzee 2003: 104–5).[16]

Such phenomena, according to Latour, demand a new political ecology based not on certainty but on uncertainty, for which the maxim should no longer be '[l]et us protect nature!', but rather '[n]o-one knows what an environment can do' (2004: 25, 80). For him, nothing demonstrates the recalcitrance of non-human actors more than the surprises and scandals that occur in laboratory experiments, repetitions of what he calls 'the myth of Frankenstein' (193). In the same way, postmodern novelists frequently deploy 'Children of Frankenstein' scenarios that recall, implicitly or explicitly, Victor's disastrous enterprise, or his fear that creating a female creature would give rise to a worldwide plague of monsters.

An obvious instance is Atwood's *Oryx and Crake*, in which '[t]he whole world is now one vast uncontrolled experiment', where 'the doctrine of unintended consequences is in full spate' (Atwood 2003: 228). In fact, even before the wiping-out of the human population by the JUVE virus, the novel's scientifically dominated administration is vulnerable to unforeseen effects. Atwood ingeniously links a chain of accumulating ferities to real contemporary events. Snowman/Jimmy's favourite example of non-human recalcitrance is Alex the African Grey Parrot, whom he learns about in 'Classics in Animal Behavior Studies'. Alex was a real animal, whose appropriate use of English under the tutelage of researcher Irene Pepperberg challenged received ideas about human linguistic uniqueness, producing a contemporary version of Crusoe's reaction when addressed unexpectedly by Poll. Jimmy's favourite moment occurs when the smart aleck bird gets '*fed up with the blue-triangle and yellow-square exercise and [says], I'm going away now. No, Alex, you come back here! Which is the blue triangle – no, the* blue *triangle? But Alex [is] out the door. Five stars for Alex*' (Atwood 2003: 54 italics in original). This incident is based on Pepperberg's own reports and videos, which show that Alex did indeed use language with this level of appropriateness, and also refused at times to accede to the instructions of his human 'owner' (The Alex Foundation 2007). To the question of what animals mean, then, Alex replies both that he means what he says, and he does what he means to do. In *Oryx and Crake* this bird becomes a symbol of both entrapment and escape. Snowman dreams of the parrot's intentions being frustrated, of his receiving corn when he asks for an almond; then he dreams that Alex leaves him behind forever (260–1; 336).[17]

Atwood again refers to contemporary scientific reality when she describes luminescent green rabbits hopping through her post-apocalyptic landscape,

descendants of specimens engineered with a gene from jellyfish to make them glow under ultraviolet light. This strain of animal – actually produced in laboratories during the 1990s – became notorious as a result of Brazilian artist Eduardo Kac's ongoing 'GFP Bunny' series (2000). In *Oryx and Crake* these rabbits interbreed with wild ones, and environmental managers respond by producing bobkittens, 'introduced as a control, once the big green rabbits had become such a prolific and persistent pest' (Atwood 2003: 95–6). Officially promoted as smaller and less aggressive than wild bobcats, the bobkittens 'soon got out of control in their turn. Small dogs went missing from backyards, babies from prams; short joggers were mauled' (163–4). The next step in Atwood's (partly) fictional history of accelerating ferity occurs when human agents – in the form of anti-corporate 'terrorists' MaddAddam – act in cooperation with non-human ones. They introduce a 'tiny parasitic wasp' to the installations where ChickieNobs – a laboratory-grown poultry product – are grown, 'carrying a modified form of chicken pox, specific to the ChickieNob and fatal to it'. Their other interventions include a 'new form of the common house mouse addicted to the insulation on electric wiring' that causes house fires, 'a new bean weevil found to be resistant to all known pesticides' that threatens the coffee industry, a 'miniature rodent containing elements of both porcupine and beaver' that destroys car engines, and a microbe that eats asphalt, turning 'several interstate highways to sand' (216). Crake locates the activists behind these genetic insurrections and persuades them to join his own project.

The creation and release of the JUVE virus, which destroys the human grip on the planet and returns it to a state of absolute ferity, again echoes contemporary anxieties, in this case those relating to microorganisms. Early in the novel, in a scene drawn (like Noah's sacrificial inferno in *Not Wanted on the Voyage*) from contemporary media footage of cattle pyres in the wake of scares about agricultural epidemics, Jimmy watches the burning of 'an enormous pile of cows and sheep and pigs' infected, in another act of biological espionage, with a 'bug' that Jimmy's father describes as 'something new'. 'Two can play at that game', says one of his colleagues. 'Any number can play', replies Jimmy's father (Atwood 2003: 15–19). Again, an instance of organic ferity based in reality achieves fictional escalation in Jimmy's lifetime: as the JUVE virus spreads and the human world descends into chaos, control over non-human agency slips away. Snowman lives in fear of meeting 'a crocodile, escaped from a defunct Cuban handbag farm and working its way north along the shore' (105). He also has to watch out for wild bobkittens, for wolvogs who have escaped their guard duties and become ferocious predators (108), and especially for pigoons. Created in the scientific compounds by splicing human genes into pigs, thereby producing a host with multiple organs ready for grafting into human beings, these animals frightened Jimmy when he visited their pens as a child, 'glanc[ing] up at him as if they saw him, really saw him, and might have plans for him later' (26). Now, living free, they have become dangerous, not only because they have grown tusks – despite being engineered to

be tusk-free, 'they were reverting to type now they'd gone feral, a fast-forward process considering their rapid-maturity genes' (38) – but also because they have the cognitive capacity to pursue the 'plans . . . for later' that Jimmy saw in their eyes as a child. '[B]rainy and omnivorous', with long memories and 'human neocortex tissue growing in their crafty, wicked heads', the pigoons attempt to hunt and trap Snowman using communication, cooperation, instrumental thinking and complex calculation of human behaviour. 'They have something in mind, all right', he thinks, when the pigoons lay siege to him outside a derelict building: 'they've had it planned, between the two groups . . . They were waiting for him, using the garbage bag as bait. They must have been able to tell there was something in it he'd want' (234–5, 267–71).

Atwood's narrative about the collapse of scientific modernity into feral chaos belongs at the end of a line of influence I traced in Chapter 2, which takes in *The Island of Doctor Moreau* and goes back to *Frankenstein* and *Gulliver's Travels*. *Oryx and Crake* opens with an epigraph from the latter text and is shot through with Swiftian moments (Atwood 2003: vii). Watson-Crick, where Crake works, is a latter-day Grand Academy of Lagado, known as 'Asperger's U. because of the high percentage of brilliant weirdos that strolled and hopped and lurched through its corridors. Demi-autistic, genetically speaking; single-track tunnel-vision minds, a marked degree of social ineptitude' (193). Taken to see Crake's work, Jimmy expects to see '[a] liver tree, a sausage vine. Or some sort of zucchini that grew wool' (302). And in the post-apocalyptic world, Snowman experiences a moment found in all three precursor texts, the nightmare of reverse vivisection: he vows to avoid 'tortur[ing] himself' by yearning for impossible treats that no longer exist 'as if he were some caged, wired-up lab animal, trapped into performing futile and perverse experiments on his own brain' (45).

The novel's most Frankensteinian or Moreauvian project is again an exercise in 'man-making', the engineering of a new strain of hominid, the Crakers. At first glance Crake seems to reverse the dream of his predecessors by dedicating himself to, rather than struggling against, the escape and autonomy of his non-human creations, manipulating Jimmy into releasing them after the JUVE virus has depopulated the planet. Like Frankenstein and Moreau, however, Crake is ultimately driven by a thoroughgoing scientific abstractionism, insofar as his masterpiece is designed in accordance with a radical version of two dogmas: Darwinism and its late-twentieth-century descendant, evolutionary psychology. Viewing the world as nothing but a complex interaction of biologically driven forces, Crake perceives human beings as mere 'hormone robots', albeit 'faulty ones' (Atwood 2003: 166). Convinced by this paradigm's account of the links between sexual competition, hunting and warfare, he attempts to remove these behaviours from his creatures' genetic programme. The Crakers are herbivores, and thus strangers to the competitive bloodthirstiness associated with predation. Their nutritional patterns are modelled on the proverbially harmless Leporidae (hares and rabbits), their dispositions

placid ('purified by chlorophyll'), and their communal identity so non-individualistic that Snowman can hardly tell them apart (101, 158–9). Sexual competition has been replaced by a ritual courtship in which the females in oestrus show bright-blue buttocks and abdomens – 'a trick of variable pigment filched from the baboons' (164) – and the males, in response, display erect blue penises – 'a feature suggested to Crake by the sexual semaphoring of crabs' (165). Thanks to Crake's zoomorphic innovations 'there's no more unrequited love these days, no more thwarted lust', because 'it's only the blue tissue and the pheromones released by it that stimulate the males'. Once the female selects her mates the 'sexual ardour of the unsuccessful candidates dissipates immediately, with no hard feeling left'. The result is '[n]o more prostitution, no sexual abuse of children, no haggling over the price, no pimps, no sex slaves. No more rape . . . no more property to inherit, no father-son loyalty required for war' (165).

Despite all these benefits, Atwood presents Crake's meticulous genetic programming as another form of confinement, which locks his creatures into a territorial and behavioural enclosure. The Crakers are stuck in their own ark, so to speak, which is both sanctuary and prison. Twice a day the men form a circle around their territory and urinate outwards: they are scent-marking, an instinct given them by Crake in imitation of 'the canids and the mustelids, and a couple of other families and species as well' (154). To Snowman, 'the ring-of-pee boundary' recalls not protection but incarceration: it 'smells like a rarely cleaned zoo' (155). Their moat of wet earth reproduces, in fact, the conditions under which they first came into being, inside the Watson-Crick laboratory enclosure, a bubble-dome with an artificial blue sky, a 'projection device that simulated dawn, sunlight, evening, night', 'a fake moon that went through its phases', and 'fake rain' (302).

Yet, for all Crake's ingenuity in designing a behavioural enclosure that will keep his creatures safe, and keep other life-forms safe from them, by the end of the novel there are signs that even the Crakers are about to go feral. 'They're up to something . . . [that] Crake didn't anticipate . . . Good on them, thinks Snowman. He likes it when Crake is proved wrong' (157). The error made by Crake repeats that of Noah Noyes, Calvin Cohn, Frankenstein, Moreau, Crusoe and the virtuosi of Lagado. Indeed it is the miscalculation that Latour identifies at the heart of the modern constitution: the ascription of agency solely to the heroes of modernity, the scientists and ecology managers, and the corresponding failure to account for the 'formidable capacity' of the objects of their manipulations to behave as 'troublemakers' and 'scandals', as 'obstacles' to mastery, as 'mediators with whom it is necessary to reckon', as 'active agents whose potential is still unknown' (2004: 81–2).[18]

Forest, Field and Wilderness

The attempt to represent the agency of non-human actors creates, for the contemporary novelist, a problem of characterization. Insofar as the novel

is aligned with the ideology of bourgeois humanism, its most valued conventions – psychological realism, an emphasis on deep affect, the commitment to portraits of individual consciousnesses – are anthropocentric; that is, they are designed to allow the exploration of human (and humanist) character. To apply these techniques to a non-human protagonist is to engage in anthropomorphism. Not surprisingly, it is *Moby-Dick*, the *locus classicus* for the novelistic representation of non-human agency, which demonstrates the two favoured options for writers confronting this challenge. The first is to accept the necessity of representing non-human agents in anthropomorphic terms; the second is to find ways of describing agency at work through the interactions of a complex and widely-dispersed network of actants, both human and other-than-human. Taking Melville's cue, the writers under discussion here tend to combine these two approaches.

In *2007*, the narrative sometimes focuses upon particular non-human 'characters', for example two border collies who act as ambassadors between the animal rebels and the human authorities (Williams 2001: 85, 129–30, 242). At other times it evokes the phenomenon of networked agency. Attempting to understand how all the world's animals simultaneously decide to revolt against human domination, the scientists discuss

> examples in nature of organisms combining in unbelievable numbers but without clear leadership. Slime moulds do it. Shoals of fish do it, flocks of birds do it, changing direction as if one leader has given the order, shown the way. But there is no top creature, no actual *leader* (38–9 italics in original).

A blend of these two forms of representation – the portrayal of decision-making by individual actors, and the evocation of unpredictable networks of actants – occurs when particular animal characters act as catalysts for wider, ramifying webs of cause and effect. *Hackenfeller's Ape* exemplifies this tendency in its portrayal of Percy, the primate of the title. Via his long-standing relationship with Professor Darrelhyde, by means of the imitation for which apes are proverbial, Percy has begun to acquire some of the defining aspects of the human psyche. Possessed of a 'mental vision flicker[ing] on the verge of being human', Percy is 'an animal discontent with his monkeydom' who longs to learn human speech (Brophy 1953: 21–3). Perceiving these tendencies, the Professor resolves to save the ape from being sent into space in a military rocket. He breaks into the zoo at night with Gloria, a casual acquaintance whose help he has enlisted. Once the cage has been opened, Darrelhyde enters to address the ape, '[f]orgetting that Percy knew neither words nor reason'. His expectation that the animal will cooperate in a human way is immediately corrected: noticing the opening, Percy

> vaulted through the hatch, knocking Darrelhyde away, crossed the cage, emerged, skipped over the path – 'Stop him!' Darrelhyde shouted to Gloria when the animal had already passed her by – cleared

> a fence, and then appeared, still, intent, outlined in moonlight, sitting on the crest of a sloping roof opposite (82).

Ignoring the pleas of his rescuers, Percy undertakes a feral tour of the zoo. Travelling 'exaltedly, by roof, tree and fence' – in a manner repeated by Erasmus and Madelene in *The Woman and the Ape* – he passes 'like a substantial angel across the Zoo, touching off here and there the note of each species, as if he had been a child left alone in a concert hall with the deserted instruments of a full orchestra'. He blows on two Indian Pandas and disappears before they wake up; ripples the water of the sea lion's pool but is 'a quarter of a mile away when he hear[s] the responding bark'; incites a display from a peacock who mistakes him for a peahen; provokes uproar in the Parrot House by jabbering through the keyhole, and then goes on to pursue, 'like Caliban, his wondering, half-befogged, half-enlightened way' (84–6). However, once this initial burst of action slows, Percy's 'mind grapple[s] with the idea that he had thrown away a chance. If he had trusted, he would have been in the Professor's company now'. Accordingly he searches for the way back to his cage, only to be shot dead by a zoo employee who mistakes the ape's gestures of reconciliation for an impending attack (101). Percy's behaviour while he is at large oscillates between two models of agency. One is the expression of a vivacious, unpredictable line of flight, which galvanizes the kinds of inter-species interactions that have been dulled by the imposition of barriers to movement. The second, a pseudo-humanist process of self-reflection, rational calculation of risks and advantages, and conscious decision-making – capacities half-instilled in Percy by his anthropomorphizing relationship with the Professor – leads to his death.

A somewhat different combination of anthropomorphic and zoomorphic modes of behaviour is at work in Findley's portrayal of Mottyl, Mrs Noyes' elderly cat in *Not Wanted on the Voyage*. Findley humanizes the notions of biological diversity, ecological balance and relationships amongst species. The ability of animals to read the behaviour of other species is translated into the cat's enjoyment of 'gossip' among her 'acquaintances' in the wood (Findley 1984: 42). Animals' intimate sensory knowledge of their locale is also processed into human terms: groves of catnip provide Mottyl with opportunities to get 'almost as drunk as Mrs Noyes'; areas in the wood that are nutritious, therapeutic or relatively safe are represented as 'holy places' or 'sanctuary places' (42–44). When Mottyl discovers the body of Barky the dog covered in flies 'she pray[s] for the dog – by leaving her heat-infested traces nearby'; a theri-anthropic representation of the necessary, cautious sensitivity of animals when faced by evidence of sudden illness or death (57). As the novel proceeds, the conventions of humanist agency are also destabilized, again by a constant code-switching between anthropomorphic and zoomorphic dialects, a two-way translation of (what Findley imagines to be) animal modes of experience into human ones, and back again. For example, Mottyl's actions are not deliberate decisions reached by rational calculus; instead they emerge from an internal dialogue with the 'calm,

even tones' of the '*whispers*' that she hears, the '[m]onotonic and reassuring . . . instinctive, enigmatically perceived commands', which she attends to 'as she did any other of her physical senses' (28 italics in original).

Once aboard the ark Mottyl provides the main outlet for ferity since, unlike the other animals, she is neither locked up nor supposed to be there at all. According to Yaweh's decree the only two domestic cats to survive the flood should be his own pets, Sarah and Abraham. But against Noah's instructions Mrs Noyes smuggles aboard her own cat, already pregnant to the tomcatting Abraham. Even before the ark is launched, then, the principles of its ecological management have been infiltrated by the kind of fertile non-human agent that is, according to Noah's and Yaweh's plans, not wanted on the voyage. Moreover Mottyl's presence catalyzes the expression of grievances among the imprisoned animals and their formation into unprecedented alliances. When she falls to the bottom deck, the inmates cooperate to rescue her: at Hippo's suggestion, One Tusk the elephant lifts the cat to the deck above: '[w]e are all in this together – and we must do what we can do' (Findley 1984: 227–9). She then sends a message 'passed from the Unicorn to the Porcupine and from the Porcupine to the Weasel and from the Weasel to the Vixen', creating a network of communication that will be put to use during the 'Great Revolution of the Lower Orders' – an insurrection attempted against Noah's tyranny by the animals, Mrs Noyes, her son Ham and his wife Lucy (231). The last-named, who is Lucifer in disguise, also incarnates an other-than-human vitality: her hair has a 'glossy sheen' like 'an animal's coat' (248), and while brooding on schemes for rebellion she goes into a 'cat-trance' during which, like Mottyl herself, she listens to voices (319–20). The revolution therefore arises from a combination of human and other-than-human agencies. Mottyl calls Crowe, who unlatches the cages to release the lemurs, snakes, wombats and nightjars, and then takes a message to Emma, Japeth's ostracized wife, who removes the barricade keeping the rebels at bay. Having gained control, the revolutionaries begin to answer the requests of the still-captive animals: more light, special feeds, visits to the top-deck to feel the sun (317–18, 335, 345).

Findley conceives the conflict between upper and lower orders in markedly gendered terms. Noah's autocratic rule is promulgated in the name of the patriarchal Yaweh, and depends on the labour of the muscular Shem, the martial athleticism of Japeth and the acquiescent service of daughter-in-law Hannah. In contrast the 'Revolution of the Lower Orders' occurs by means of a network of feminine agencies embodied by Mrs Noyes, Lucy, Mottyl, Crowe and Emma. These are figures associated with the feral spaces beyond the religious and scientific parameters that govern Noah's domain. When Mrs Noyes absconds from the ark to search for Mottyl she relishes her escape into wildness:

> wandering through the fields or walking along some trackless path . . . she felt that civilization was falling away from her shoulders, and she was gratified. What a burden it had been! . . .

> One morning, Mrs Noyes lifted up her skirts and – squatting in full view of the windows of an abandoned carriage – she peed.
>
> How wonderful that was! (Findley 1984: 146).

In this respect *Not Wanted on the Voyage* takes up and extends an association between recalcitrant non-human agency, feral space and femininity that stretches back to include the amorous young female Yahoo in *Gulliver's Travels*, the putatively fertile female Creature in *Frankenstein*, the puma woman in *Island of Doctor Moreau*, and D. H. Lawrence's biocentric heroines Ursula Brangwen, Kate Leslie and Lou Witt. The same identification of female characters with feral space or the vitality of non-human life occurs in almost all the novels discussed here. In *Disgrace* David Lurie finds himself 'in the wilderness' with his daughter Lucy, who tells her father that 'there is no higher life. This is the only life there is. Which we share with animals' (Coatzee 2000: 74). In *Hackenfeller's Ape*, the pickpocket Gloria agrees to help Professor Darrelhyde because her time in prison allows her to identify with the animals in their enclosures (Brophy 1953: 71, 73). In *2007* Kate Schumpeter is the first human to make contact with the leaders of the non-human rebels (Williams 2001: 114–16, 126–131, 135–7).

The same is true of at least two contemporary parodies of *Moby-Dick*. In Thomas King's *Green Grass, Running Water*, there is no great white male Moby Dick, but instead a black female whale called Moby Jane, who turns up every year to sink the *Pequod* while Ahab rages at his crew, throwing overboard anyone who dares to deny the whiteness or maleness of his epic antagonist (King 1993: 217–22). Chistopher Moore's satire *Fluke*, published ten years later, features dolphin-like cetaceans piloting 'whaleships' made from organic technology in the shape of humpbacks and spermaceti as part of a general mobilization of the organic world against humankind. Here again it is the female protagonist, the half-human, half-non-human 'alpha female' Amy, who plays the decisive role by negotiating between the two sides of the impending conflict (Moore 2003).

Of course the Frankenstein narrative lends itself especially well to the intertwining of gender and human–animal politics. In *The Memoirs of Elizabeth Frankenstein*, Elizabeth escapes the masculine-dominated world of the Frankenstein household to live for some weeks in the forest as what she calls a 'feral woman' (Roszak 1995: 279–99). Near the end of the novel she forms an intimate bond with a stranger called Adam who also lives wild, and whom she thinks of as 'half-animal' (391) – only to discover that he is, as the reader suspects, Victor's Creature. In *Oryx and Crake*, a freer adaptation of the Frankenstein narrative, two such associations also occur. Snowman invents a post-apocalyptic mythology for the Crakers in which Oryx, who may have been the young girl Crake and Jimmy saw abused on a pornography website, becomes a kind of nature-goddess. Her prestige underwrites the principle of respect for animals, the 'Children of Oryx', which is demanded by the Craker matriarchs. The second example is provided by Jimmy's mother. Initially a microbiologist working for

OrganInc, she becomes increasingly convinced that the corporation's experiments are 'immoral' and 'sacrilegious', 'interfering with the building blocks of life' (Atwood 2003: 57). Eventually she escapes from the OrganInc compound, becoming part of the global anti-corporate activist movement. In the note she leaves for Jimmy she writes '*I have taken Killer with me to liberate her, as I know she will be happier living a wild, free life in the forest*'. Killer, too, is a feral female: she is Jimmy's pet rakunk, a hybrid of skunk and raccoon. Although at the time Jimmy is outraged, thinking that as 'a tame animal, she'd be helpless on her own', years later Snowman realizes his mother was correct: 'Killer and the other liberated rakunks must have been able to cope just fine, or how else to account for the annoyingly large population of them now infesting this neck of the woods?' (61).

The Island of Doctor Yerkes

The shift in representations of human–animal relations during the twentieth century can be measured in reference to one species, the gorilla – indeed in reference to one gorilla narrative, *King Kong*. In Merian C. Cooper's 1933 original, Skull Island and its prehistoric, super-savage inhabitants are archetypes straight from the modernist therio-primitive bestiary. By 1976, in John Guillerman's remake, Kong has become an icon of the environmentalist movement. His island home is threatened by an avaricious oil executive and his fatal fall occurs from the summit of the World Trade Centre towers (Creed 2007: 72). And when Peter Jackson remakes the film again in 2005, Kong's island is portrayed as another of postmodernity's fragile, fenced-off ecosystems, 'one of the few blank spots' on the map of globalizing Western enterprise. In a mockumentary entitled *Skull Island: A Natural History*, Jackson accounts for the exceptional savagery of species on the island by explaining that its land mass and biomass have been shrinking as a result of geological activity, 'so all of the creatures who once survived on a much bigger piece of land have now been shunted into the middle as the island sinks and the coast comes in'. Skull Island is a foundering ark, threatened both by geological contraction and by the intrusion of modernity, as represented by Denham's hired ship, the *Venture*, with its cargo of exotic animals. Accordingly the giant gorilla himself – injured, exhausted, melancholic, endangered, 'the last of his kind', *Megaprimatus Kong*, whose 'extinction result[s] from a combination of nature's wrath and the weaponry of modern man' (Jackson 2006) – embodies contemporary pessimism about the future of wild animality. For Barbara Creed, the changes in Kong's characterization over seven decades derive from an equally marked alteration in perceptions of the great apes, resulting not just from the influence of environmentalist thought but more specifically from the work of primate researchers, both in the field and in laboratories (2007: 71–3). Creed's hint is worth following up with a detailed examination of the interconnections between primate-themed fictional narratives and scientific study of the great apes over the last century.

According to Donna Haraway, primatology in the first half of the twentieth century was a 'part of the system of unequal exchange of extractive colonialism' (1989: 19). Research stations were maintained in colonial territories, from which animals were also imported to stock metropolitan laboratories, zoos and museums. Haraway focuses on Carl Akeley – explorer, hunter, natural historian, taxidermist, friend of Theodore Roosevelt and founding genius of the Akeley African Hall of the American Museum of Natural History (AMNH) – as the epitome of relationships between Western humans and the great apes during this period. The AMNH display that best expresses Akeley's contribution is the Giant of Karisimbi, the 'silverback male gorilla that dominates the diorama depicting the site of Akeley's own grave in the mountainous rain forest of the Congo, today's Zaire'. 'The gorilla was the highest quarry of Akeley's life as artist, scientist, and hunter', writes Haraway, because the animal's 'similarity to man' makes it the 'ideal quarry', "the 'other", the natural self'. Hence she imagines the 1921 meeting between Akeley and this animal as a replay of Frankenstein's meeting with his alter ego on Mont Blanc (31). The Giant of Karisimbi is also Carl Akeley's King Kong, captured a decade before Carl Denham's, brought back from a savage wilderness for display in the centre of New York. And Akeley's hunt anticipates also the African safaris undertaken by Ernest Hemingway in the 1930s. There is the same competitive desire for an ideal trophy, resulting in a considerable by-catch of lesser specimens, and the same assumption of privilege towards both the non-human quarry and local human natives (Haraway 1989: 41, 53). These similarities are not surprising. Akeley's hunting and taxidermy are no less products of American modernism than *King Kong* or the works of Hemingway. Indeed, the way in which high modernism defines itself against high modernity can be seen in Akeley's faith in the nobility of his quarry, which Haraway contrasts with Paul du Chaillu's account of his killing of a gorilla in 1855, 'eight years after it was "discovered" to science', which emphasizes the animal's depravity and viciousness (Haraway 1989: 31–2). Whereas, 'in the context of colonial expansion, apes, and especially the gorilla, came to be seen as powerful personifications of wildernesses to be fought and conquered heroically by civilised man' (Corbey, in Cavalieri and Singer 1993: 131), by the 1920s this conquest was all but complete and the gorilla became a focus of modernist nostalgia for 'Nature', a 'potent symbol of innocence' that contrasted with the corruptions of civilization (Haraway 1989: 54).

Of course, modernism only achieved such force in the early twentieth century because the modernity it critiqued was still dominant. At the same time Carl Denham and Carl Akeley were exhibiting their gigantic noble beasts, living apes were being forced into the service of modernity as well. One example is described by Coetzee's Elizabeth Costello, who recounts the work of Wolfgang Köhler, conducted at a research facility run by the Prussian Academy of Sciences on Tenerife between 1912 and 1920. Aiming to study the mental capacity of apes, Köhler puts Sultan the chimpanzee into a cage without food. He hangs a bunch of bananas from the ceiling.

They are beyond the animal's reach, but the scientist has supplied three wooden boxes. Sultan has to figure out how to stack the boxes and climb up to reach the fruit. Next day Köhler makes the crates heavy by filling them with stones, so Sultan has to empty them before stacking. 'One is beginning to see how the man's mind works', remarks Costello (Coetzee 2003: 73). Then the bananas are put outside the cage, and Sultan has to use a stick to drag them closer. 'At every turn', Costello observes, 'Sultan is driven to think the less interesting thought'. Locked in isolation, deprived of regular meals, and shown food he cannot reach, Sultan is not supposed to think, '[w]hy is he starving me?' or '[w]hy do men behave like this?' Instead he is 'relentlessly propelled toward lower, practical, instrumental reason (How does one use this to get that?)' (72–3). Captured, caged, stuck on this 'island prison camp', this 'penal colony', Sultan is forced into a contraction of cognitive space as well as physical space:

> [i]n his deepest being Sultan is not interested in the banana problem. Only the experimenter's single-minded regimentation forces him to concentrate on it. The question that truly occupies him, as it occupies the rat and the cat and every other animal trapped in the hell of the laboratory or the zoo, is: Where is home, and how do I get there? (75).

Costello recounts Köhler's experiment from Sultan's perspective in order to challenge modernity's self-congratulating demonstration of its own privileged forms of thought, 'the specialism of a rather narrow self-regenerating intellectual tradition whose forte is reasoning' (69).

Costello's critique of practical reason follows the tradition of *Gulliver's Travels* and *Frankenstein*: a narrative about science, told from the perspective of the experimental subject rather than the experimenter. It also draws on the most influential literary great ape narrative of the twentieth century: Franz Kafka's 'Report to an Academy'. Costello compares Köhler's 1917 monograph *The Mentality of Apes* and Kafka's 1919 story. Both Sultan and Rotpeter, Kafka's ape narrator, are 'captured on the African mainland by hunters specializing in the ape trade, and shipped across the sea to a scientific institute' (Coetzee 2003: 72). Both are part of a global trade in organic specimens; both experience the contraction of animal spaces that expansive modernity produces. Rotpeter's captor is the father of the contemporary zoo, Carl Hagenbeck; two years later it could have been Carl Akeley; ten years later Carl Denham. But although he yearns for a 'way out', Rotpeter emphasizes that he does not mean 'freedom' in the human sense. Observing trapeze artists flying through the air during his time in Hagenbeck's circus, he realizes that the human idea of freedom means little more than 'self-controlled movement'. 'What a mockery of holy Mother Nature!', he concludes. 'Were the apes to see such a spectacle, no theater walls could stand the shock of their laughter' (Kafka 1999 [1919]: 253–4). The discipline of the trapeze artists exemplifies modernity's fantasy of mastery over space, but it is no more than a circus trick in contrast to the

nexus of sensory, social and instinctual interrelationships that comprise animals' occupation of an environment.

For Rotpeter – as for Madelene and Erasmus in Høeg's novel – there is no longer any hope of attaining 'freedom', in animal terms, from modern space. 'I was pinned down. Had I been nailed down, my right to free movement would not have been lessened'. The immediate source of his confinement is not physical but epistemological; he is held captive by how humans perceive him: 'as far as Hagenbeck was concerned, the place for apes was in front of a locker – well, then, I had to stop being an ape'. Both Sultan and Rotpeter escape the corners into which modernity paints them by 'aping' – the hidden metaphor is an ironic one, since it is humans who force them into imitation – their captors. Sultan performs the kind of instrumentalist reason that Köhler looks for; Rotpeter goes further, and ends up addressing an academy of the kind that sponsored Köhler's work on Tenerife. He begins learning from the sailors on board the ship that takes him to Europe: '[i]t was so easy to imitate these people. I learned to spit in the very first days'. One man pays him particular attention because he perceives 'that we were both fighting on the same side against the nature of apes and that I had the more difficult task' (Kafka 1999 [1919]: 257). The brutal behaviours that Rotpeter takes for signs of humanity – his 'teacher' burns him with a lighted pipe when he is displeased – are not confined to the sailors, but apparent also amongst the bourgeois Europeans whose society he eventually enters:

> I read an article recently by one of the ten thousand windbags who vent themselves concerning me in the newspapers, saying: my ape nature is not yet quite under control; the proof being that when visitors come to see me, I have a predilection for taking down my trousers to show them where the shot went in. The hand which wrote that should have its fingers shot away one by one. As for me, I can take my trousers down before anyone if I like; you would find nothing but a well-groomed fur and the scar made – let me be particular in the choice of a word for this particular purpose, to avoid misunderstanding – the scar made by a wanton shot (251–2).

The urbanity of this passage, and its scorn for the hypocrisy of European civility, recalls the Houyhnhyms' mystification at Gulliver's determination to hide his body from sight, or his association of guns and explosives with enlightenment. So does Rotpeter's assessment of his present condition. Having reached 'the cultural level of an average European' he remarks coolly, '[i]n itself that might be nothing to speak of, but it is something insofar as it has helped me out of my cage and opened a special way out for me, the way of humanity' (258).

As Coetzee's comparison of Kafka and Köhler suggests, even real-life scientific encounters between humans and other primates during the twentieth century were strongly marked by a Swiftian flavour. The exchange

between human perspectives and (supposedly) animal ones has shaped scientific epistemologies no less than literary ones. Haraway has shown the two-way influence between primatology and the human sciences during the twentieth century. She gives the example of Robert Yerkes, the father of American primate studies, who spent the 1920s and 30s 'building structures (laboratories, funding, students, ideas, logics of application, myths) for the study of primates as the most revealing objects for a psychobiology of human engineering'. By constructing his 'primate model' Yerkes was also 'building a powerful technology to remodel persons', including the development of scientific approaches to 'personnel management and industrial relations' by corporate and governmental interests (Haraway 1991: 65–7).

American primatology repeatedly displays this Moreauvian tendency towards 'man-making'. In 1931, Indiana psychologist Winthrop Kellogg and his wife Luella adopted a young chimpanzee, named Gua, and brought her up alongside their infant son Donald. Both were clothed, house-trained, seated on high-chairs and taught to eat from plates using cutlery. Both were regularly tested for the development of their IQs and their acquisition of language and various emotional and social capacities. Kellogg explicitly described the aim of the experiment as 'humanizing' the ape – although the expectation, of course, was that the chimpanzee's abilities would trail behind the human's. But neither aim nor expectation was met. Since humans mature slowly in comparison with other primates, the superiority of Gua over her 'brother' in co-ordination was not surprising, but her equal or better performance in comprehension and 'pre-school tests' was. Also unforeseen was the fact that Gua's initiative, ingenuity and willpower were so far in advance of Donald's that he insistently deferred to her leadership. Indeed the experiment showed every sign of reversing its designer's intentions: 'while the Kelloggs were intently "humanizing" Gua', writes Adrian Desmond, 'the little ape it seems was unwittingly "pongising" poor Donald', who began gnawing at pieces of wood and giving chimpanzee food-barks at the sight of treats. As for language acquisition, after a few 'proto-words' – the first of which was 'Gya' – Donald gave up talking in favour of gesture. Language tests diagnosed him as 'considerably retarded for his age', at which point '[t]he experiment was aborted; Donald returned to normal and Gua to a cage' (Desmond 1979: 81–2). Had the Kelloggs read Kafka they might have anticipated this effect: as Rotpeter tells the Academy, his 'first teacher was almost himself turned into an ape' by their interaction, and 'had soon to give up teaching and was taken away to a mental hospital' (Kafka 1999 [1919]: 258).

Following the Second World War, the scientific fantasy of teaching chimpanzees to speak became something of an obsession. The traumas of the mid-century – technologies of mass destruction turned against civilian populations, and the consequent crisis of faith in modernity's virtues – lent urgency to the search for the roots of human nature. Once again apes provided the perfect mirror for humanity's self-analysis, the missing link

between its contemporary crisis and its animal heritage. And the most urgent areas of enquiry were the same features of scientific humanity identified by its founders, Descartes and Bacon: language, abstract thought, instrumental logic, practical reason. The first step was to investigate the differences in linguistic ability between apes and *Homo sapiens*. Keith and Cathy Hayes, inspired by the Kelloggs' effort two decades earlier, attempted in the 1950s to teach a chimpanzee to vocalize human words, but failed 'to elicit anything short of a few baby words uttered with a thick chimp brogue, even after years of laboured coaxing' (Desmond 1979: 28). Concluding that the source of chimpanzees' failure to talk was not cognitive but physical – the absence of a larynx shaped to the production of human phonemes – another couple, the Gardners, tried teaching their experimental subject American Sign Language (ASL or AMESLAN). Rapidly learning to use manual signs appropriately and dialogically, a young female chimp called Washoe became the first of many signing apes who would undermine the Cartesian axiom that the ability to use symbolic communication is unique to humans.

Washoe's breakthrough led to subsequent experiments aiming to prove, disprove, refine or complicate the Gardners' results. Her more famous successors include the wittily named Nim Chimpsky, who spent his formative years with a large human family in a house on New York's West Side; Lucy, the adoptive child of the Temerlin family at the University of Oklahoma; Sue Savage-Rumbaugh's garrulous bonobo Kanzi and H. Lyn White Miles' chatty orang-utan Chantek, both born at the Yerkes Primate Research Facility in Atlanta, Georgia; and the biggest and most famous of them all, Koko the talking gorilla, who has lived under Francine 'Penny' Patterson's care since infancy (Desmond 1979). As each of these ape pioneers crossed the cognitive division supposed to separate humans from other animals, the bar would be raised higher. Once the ASL experiments established that apes could use symbolic representation, the debate shifted to whether they could master grammar; when they showed they could manipulate syntax, scientists asked whether they could achieve 'cross-modal matching', that is, the ability to associate 'diverse perceptions of the same object' – as experiments run by Davenport and Rogers in 1971 showed they could (Desmond 112–13).

The more positivistic language researchers, moreover, relied on the peculiarly modern logic of abstraction, also embraced by zoos, which asserts that the real nature of organic life is best ascertained by isolating organisms from their natural network of living relations. Determined to minimize the white noise produced by complex social interactions amongst apes, or between apes and their adoptive human families, these scientists returned their chimpanzee subjects to solitary confinement. Both David Premack's Sarah and Duane Rumbaugh's Lana were caged to rule out contextual variables. Such experiments not only retained the logic of rationalist instrumentalism, but made their ape subjects enact it, as Köhler did with Sultan. Premack invented for Sarah 'a system involving arbitrarily shaped, brightly coloured, plastic word-symbols', designed to test her capacity for the radi-

cally abstract thinking implied by structuralist linguistics (Desmond 1979: 90; Premack 1976). Taking this approach to a new level, Duane Rumbaugh's 'LANguage Analogue' or LANA project at the Yerkes Regional Primate Research Centre instigated 'a computer-run language trainer which would ... respond automatically to the ape's request (as long it was formulated correctly) ... and generally record and analyse all exchanges and their outcomes' (Desmond 1979: 97).

Twentieth-century writers have been drawn to the satirical potential of such procedures. Brophy's *Hackenfeller's Ape* reflects early experiments in primate linguistics in portraying the monologues that Professor Darrelhyde directs towards Percy the ape through the bars of the latter's cage. Although she insists that Percy gains a strong sense of the emotional content behind the Professor's words, Brophy notes that '[i]t was an indisputable scientific fact that Percy would never be able to speak' (1953: 21) – anticipating the findings of speech-sound analyst Philip Lieberman, who in 1972, used computer simulations to show conclusively that the ape larynx, being shorter than the human one, cannot produce the sounds necessary for human speech (Desmond 1979: 29). Brophy also anticipates the Gardners' insight that apes communicate more eloquently through gesture than through vocal language. She describes Percy watching a group of men discussing his own escape: '[d]eaf to words, he went by gestures: and the sense of crisis which the men were studiedly repressing from their conversation was immediately betrayed to the animal' (Brophy 1953: 100). Of course, as well as understanding it, Percy 'speaks' the language of gesture like a native, even across the inter-species barrier. At one point, lost in despair, the Professor clings to the apes' cage with his eyes shut, 'hanging outside where Percy so often hung from the inside', when he feels 'something leathery touch his palm . . . The monkey's forefinger had been inserted, to give comfort, in his own agonised fist' (67–8).

In *God's Grace*, too, Bernard Malamud draws out the satirical implications of language experiments with apes. Discovering that the only other survivor on board the ship is a young chimpanzee, whom he names Buz, Calvin Cohn immediately yearns to communicate with him. After he tells the ape they are the only survivors of a nuclear holocaust, 'the chimp beat his chest with the fist of one pink-palmed hand, and Cohn wondered at the response; protest, mourning – both? Whatever he meant meant meaning' (Malamud 1982: 17). Thus, initially, Cohn attends eagerly to the chimp's own 'meaning'. It is Buz who trains Cohn to recognize the gesture for *thirsty*, and, after they have their first altercation, the chimpanzee sign for *reconciliation*: '[t]he ape presented his rump to Cohn, who instinctively patted it. He seemed to signal he would like to do the same for Cohn, and he presented his right buttock and was touched by the animal. Civilized, Cohn thought' (20). But soon human meaning begins to take precedence. Cohn learns that the little ape knows AMESLAN, and later discovers, upon cutting away Buz's neck cloth, 'two flattened copper wires [growing] out of the scar where a man's Adam's apple would be' which, when connected,

activate a mechanical voice-box surgically implanted by Dr Bünder (64). Similarly, in 1966 David Premack and Arthur Schwartz designed 'a mechanical voice-box controlled by a joystick that the ape could operate manually', which would eventually 'be miniaturized into an electronic device strapped to its waist or wrist' (Desmond 1979: 89). Frustrated by the inadequacy of available technology, Premack abandoned this scheme, inventing in its place the colourful symbolic system used by Sarah. Buz is a parody of such attempts. His voice, which is 'metallic' and, 'reminiscent of Dr Bünder's, sound[s] like a metachimp's', blending the accent of the scientist with mechanical sound effects, creating a tone evocative not of a living animal but a conceptual abstraction (Malamud 1982: 65). This combination is represented by the 'pong-pong' that concludes Buz's sentences, which seems to allude to his place in the taxonomic category *pongidae*, but is actually produced by the copper wires vibrating together.

As soon as the wires are connected, however, Buz asserts that without Bünder's intervention he would have started speaking anyway: '[i]f he hod waited another weeg or two I would hov done it myzelf/// I was already talging on my libs but he didn't hear it/// I would hov talged oz I do now/// pong-pong'. When Cohn asks how this could have happened 'without a proper larynx', Buz replies, '[b]ecause onimals con talg/// . . . We talg among ourselves/// Maybe someday you will hear our phonemes oz we hear yours/// If you con communicade with one living onimal/// you con communicade with all his relations' (Malamud 1982: 65–6). To Buz, the human is characterized not by the ability to talk, but by the inability to listen. In surgically altering his voice box, Bünder takes away the possibility of hearing the animal's own phonemes. This exchange satirizes the anthropomorphic precepts underlying attempts to teach apes human languages, whether vocal, gestural, written or digital. Sometimes this anthropomorphism has been as explicit as the Kelloggs' attempt to humanize Gua, but even the rigorously positivist studies depend on a human paradigm of linguistic structure and abstract thought, against which the achievements of the animals are measured. For example, Rumbaugh and Gill, having hoped their experiment might allow them to 'engage Lana in conversation to learn about a variety of things from the perspective of an ape', admit that on the contrary she has never 'asked for the names of things unless they held some food or drink that she apparently wanted, never "discussed" spontaneously the attributes of things in her world' (1976: 575). They judge it unlikely that chimpanzees will ever show the capacity to exploit 'linguistic-type skills' in order to 'enhance their broad understanding of their world and how things in it work' – a point they suggest 'might reliably differentiate language utilization by the child from that ape' (575). Since they take it as axiomatic that 'language is inherent in the covert cognitive operations that provide for the comprehension of relationships, the formulation of strategies for problem solving, and other expressions of creativity' (565), Rumbaugh and Gill's conclusion disqualifies chimpanzees from precisely those abstract and instrumentalist forms of intelligence which the

scientist prizes as the ultimate human possession – the kind of intelligence, in fact, that would design such an experiment in the first place. In short, Lana has failed to become a scientist herself. Of course, as Desmond points out, Rumbaugh's programme was not designed 'to encourage Lana to "broaden her horizons", since her horizon was invariably four walls and a computer' (1979: 120). It is far from clear why such an environment – in contrast to the rich social and sensory matrices of a kin-group and a jungle ecosystem – should inspire a chimpanzee to inquire 'how things work'; or how such an animal should intuit that human language might be useful for such inquiry, considering the consistency with which her human companions associate it with the awarding or withholding of food.

In fact there is plenty of evidence that even under these circumstances, the apes have plenty to say, but no one who can hear it. Surely Lana is initiating discussion of 'the attributes of things in her world' when she vainly types out 'please machine tickle Lana' after her human companions have gone home for the night (Fouts and Mills 1997: 287)? More often, these apes use other forms of communication which their observers, attentive like Dr Bünder to human language alone, cannot hear. One instance is provided by Sarah, one of Lana's forerunners. Confined to her cell according to Premack's insistence on clinical rigour, Sarah is allowed to watch movies to alleviate her boredom.

> Recently, when shown a videotape of a TV program on wild orangutans, Sarah . . . watched with uninterrupted attention for almost 30 minutes. When a young male was captured in a net, Sarah hooted and threw pieces of paper at the screen, seemingly aimed at the animal's captors. The trainer, watching with Sarah, reached up and touched the image of the captured animal on the screen; Sarah shuddered and turned a wildly startled face to the trainer (Premack 1976: 346).

Premack cites the incident solely as evidence of the chimpanzee brain's ability to 'recognize the relation between a picture and the item pictured' (346), while Desmond describes it as an 'engaging' story which shows that, because she can 'read' two-dimensional images like a human being, 'Sarah enjoys a rousing movie' (1979: 115). Yet it would be hard to imagine a more direct challenge from a chimpanzee subject to her experimenters, or one that seems more like an attempt to 'broaden [her] understanding of [her] world and how things in it work'. Of course, Sarah is using her native language to do so: the characteristic chimpanzee combination of non-verbal vocalization, gesticulation, facial expression and meaningful action (in this case, the throwing of objects). Translated into English, the questions Sarah poses might be very similar to those Elizabeth Costello attributes to Sultan – '[w]hy do men behave like this?'; '[w]here is home, and how do I get there?' (Coetzee 2003: 72–5) – but Premack's protocols do not allow him to consider whether Sarah is alluding to her own memory of capture and, even more strikingly, identifying empathetically with the experience of

another animal, indeed a member of a different species. The experimenter remains intently deaf to the unsettling possibility that Sarah may be expressing chimpanzees' antipathy – shared with both orang-utans and humans – to enforced, captive isolation from their kin.

Gombe, Karisoke, Tanjung Puting

Twentieth-century linguistic experiments certainly changed perceptions of the great apes, but an even greater impact was made by observations undertaken outside the laboratory. Most famously, beginning in 1960, three young women were sent by palaeontologist-anthropologist Louis Leakey to study great apes in remote locations: Jane Goodall to the chimpanzees of Gombe in Tanzania, Dian Fossey to the mountain gorillas of the Varunga range between Rwanda and Congo (Zaire), and Biruté Galdikas to the orang-utans of Tanjung Puting reserve in Borneo. Leakey chose young women because he imagined them to be 'without the scientific prejudices of the masculine world of modern research' (Haraway 1989: 151). Certainly, his three most famous protégées demonstrated a remarkably feral relationship to the pieties of scientific modernity. Their stories repeat the narrative of feminine engagement with wild space that is exemplified by the fictions of Findley, Roszak and Atwood.

Jane Goodall describes how, during her isolation from human contact amongst the chimpanzees of Gombe Stream, she 'longed to be able to swing through the branches like the chimps, to sleep in the treetops, lulled by the rustling of the leaves in the breeze' (1971: 56–7). Finding her clothing cumbersome in the drenching rain, she makes her daily trek to her observation point naked, while her skin hardens against the sharp grasses (60–1). Eventually the local chimps accept her 'as part of their normal, everyday landscape. A strange white ape, very unusual to be sure, but not, after all, terribly alarming' (66). And when she has a son she applies some of the rearing techniques she has observed among chimpanzee mothers: breast-feeding on demand, carrying the infant throughout her travels through the terrain, following punishment with immediate reassurance through physical contact (215) – thereby reversing the Kelloggs' attempt to humanize baby Gua.

A similar feralizing effect characterizes the careers of Leakey's other two 'ape-women'. Dian Fossey went to the Virunga range during the 1960s to study the local mountain gorillas. She named her camp Karisoke, combining the names of the nearest peaks, Mount Bisoke and Mount Karisimbi – the latter, of course, the location for Carl Akeley's shooting of his version of King Kong. Like Goodall, Fossey set about learning the gestures and vocalizations that made up the language of her ape subjects. In 1970 she was rewarded by the first friendly gorilla-to-human physical contact recorded. As is well known, her identification with the animals did not stop there. When poachers killed Digit, a young male with whom she had a special bond, Fossey instigated a public campaign against hunting of the

species. After ten years of increasingly militant direct action against poachers she shared Digit's fate and was murdered at Karisoke in 1985 (Haraway 1989: 149, 263–8). The third of 'Leakey's angels', Biruté Galdikas, arrived in Indonesian Borneo in 1971 to study orang-utans. She established a research station, Camp Leakey, in Tanjung Puting Reserve. Like Goodall she cared for her infant son amongst the apes, noting – albeit with some alarm – the influence of his orang-utan playmate, Princess: '[t]heir facial expressions, sounds, and postures became very similar', she wrote, and 'he would try to follow Princess and play with her in the trees', as well as scrambling on all fours, occasionally biting people, and even picking up sign language from his orange 'sibling' (Galdikas 1980: 849). Like both her predecessors, Galdikas became a powerful spokesperson for the protection of the animals she studied. To this day Camp Leakey operates as a combined observation centre and a rehabilitation unit for orang-utan orphans.

The work of these three women has posed perhaps the most powerful challenge of recent times to the boundary erected by modernity between human and animal. One famous example is Goodall's documentation of non-human apes' manufacture and use of tools. She observed the Gombe chimpanzee David Greybeard, and others, selecting a certain kind of twig, carrying it to an area full of termite mounds, shaping it by stripping its leaves, and dipping it into holes in such a way that termites would cling to it and could be drawn out and eaten (Goodall 1971: 43–5). Recognizing the implications of this observation, Louis Leakey wrote to Goodall that '[n]ow we must redefine tool, redefine Man, or accept chimpanzees as humans' (Jane Goodall Institute 2007). In contrast to the man-making primatology of Yerkes and his heirs, the work done by Goodall and her peers has had a man-breaking or anthropoluotic effect.

In *God's Grace* Bernard Malamud draws explicitly on Goodall's work (Malamud 1982: vi). If Buz recalls the talking apes of America's primate research centres, the other chimps are based on the troop at Gombe Stream. Esau, the strongest, is portrayed 'squatting on the ground poking long straws into the mound-nests of nonexistent ants' (144) – a wry caricature of the capacity for tool use which, in its most 'advanced' form (nuclear technology) has caused the extinction of insect life. Esau's name, that of Jacob's brother in the book of Genesis, derives from a Hebrew word meaning 'complete', because the original Esau was born hairy, strong and capable (rather like a chimpanzee baby), but was tricked by his twin into giving up leadership of the house of Israel – just as in *God's Grace* the anthropomorphized Buz, with his scientific and religious metaphysics, gains the edge over Esau as the dominant male. It is no accident that the conflict between Buz and Esau has a human antecedent, for Malamud presents it as the outcome of the chimps' incorporation of human concepts and practices. In an echo of the social-engineering agenda of Yerkes, Cohn intends to forge a better humanity from his chimpanzee raw material, judging that the nuclear apocalypse occurred because '[man] never

mastered his animal nature for the good of all – please excuse the word – I am an animal myself . . . he behaved too often irrationally, unreasonably, savagely, bestially' (Malamud 1982: 133–4). By teaching the chimps to master their animality, Cohn believes he can create a population 'more carefully controlled, more easily inclined to the moral life; in the larger sense more "humanly" behaved than the species of which [he is] the last survivor' (164). Despite the chimps' scepticism – Buz says 'he would rather be a chimp', while the others respond by shitting on Cohn's head, as the Yahoos did to Gulliver (18, 69–70, 101–102) – Cohn trains them to delay self-gratification for the greater good. 'Sublimation is what I advise', he tells Esau when the latter complains about the shortage of females, '[t]hat's using one's sexual energy creatively – in thought, art, or some satisfying labour' (186–7). Esau is unimpressed, but Buz proves an apt student who, frustrated in his sexual desires, asks Cohn 'to teach him algebra so he [can] go on sublimating' (172). Meanwhile the rest of the chimps, led by Esau, become increasingly resistant. Against Cohn's prohibition they begin to hunt, kill and eat young baboons (187–91, 195–8). When reprimanded, Esau tells Cohn that 'every chimp he had known "in the good old days in the highland" had hunted small baboons. It was a perfectly natural, naturally selective, thing to do. The hunt was stimulating and the flesh delicious'. Reclaiming the forms of pack agency that are his birthright, Esau challenges Cohn's anthropomorphic attempt to reshape his behaviour: '[o]f course', he adds, 'if there was a piece of sex around instead of that horseass sublimation you are trying to trick on us, we would have something to keep our thoughts going' (194). He is referring to the young female chimp Mary Madelyn, who no longer favours her male conspecifics because of Cohn's influence, which Esau says 'has made her too proud to dip her butt for friends' (153). Cohn's humanizing programme exacerbates these violent tendencies until Buz, who has developed an oedipal sexual envy of Cohn's relationship with Mary Madelyn, collaborates with the rest of the pack to force the young female back into the troop, kill her baby, and ultimately sacrifice Cohn himself.[19]

The storyline of *God's Grace* closely echoes the history of the Gombe chimpanzees. *In the Shadow of Man* was taken to portray a kind of Edenic version of natural man, but Goodall subsequently shattered this illusion, reporting infanticide, cannibalism and excessive intra-specific aggression amongst members of the Gombe troop. During her 1978 Leakey Memorial Lecture at the British Museum, Goodall 'visibly stunned her academic audience' by detailing 'a bloody spate of panicides' that had occurred after a number of chimpanzees seceded from the main troop in 1972. Premeditated and cooperative ambushes by groups of males from the main group occurred against individuals from the splinter group until it was completely destroyed (Desmond 1979: 222–3). Desmond speculates on the causes of this internecine warfare. The males who were mostly responsible for the violence, he writes, were 'impressionable adolescents or young adults' during the preceding decade, which was 'a highly abnormal time for

Gombe apes', in large part because of Goodall herself (225). In order to observe the initially shy chimpanzees, Goodall undertook regular 'banana provisioning' from 1962 onwards. This drew chimps into her camp, but also baboons. The resulting competition increased exponentially the incidence of conflicts between chimps and baboons, as Goodall, with characteristic honesty, noted herself (1971: 130, 190–1). Prior to this period, baboons and chimpanzees coexisted as an (admittedly ambivalent) interspecies community – their young playing together, adults from different species sometimes grooming each other – within which chimp predation of young baboons was the occasional exception to a more generally amenable relationship. Now, however, in the competitive atmosphere produced by Goodall's banana distribution, what Desmond calls 'pure hunting' – that is, predation of another species for food, which Goodall observed amongst the Gombe chimps from the outset – became inflected with an exaggerated aggressive dimension. The facial expressions, vocalizations and gestures of Gombe chimpanzees when killing baboons began to exhibit forms of 'brutal', 'intimidating' and 'terrorizing' display, characteristic of competitive conflict but absent from the behaviour of chimpanzees engaged in 'pure hunting'. This suggests the young males had become 'habituated to intercommunity killing, familiar with the insidious blend of violent aggression and refined hunting which targeted one's own kind and marked it for death' (Desmond 1979: 225–7). In other words, competition between the baboons and the chimpanzees escalated occasional predation into competitive attack, a style of aggressive conflict which then spilled over, during the next decade, into savage battles between factions of the chimpanzee troop itself.[20]

The ambiguity of the relationship between baboons and chimps is incorporated into *God's Grace*, where it functions in a way parallel to human racism. When Cohn reprimands the chimpanzees for saying that the baboons are 'strangers' who don't belong to their 'tribe' Esau replies: '[t]hey're monkeys and ought to look like monkeys. Instead, they look like monkeys with dog-heads, I don't go for that' (Malamud 1982: 186). What follows is an escalating sequence of conflicts that parallels events at Gombe. First Esau, acting alone, hunts and eats the baboon child Sara (189–90). Then a group of male chimps under the command of Esau ambushes two young baboons, leading to an all-out confrontation with the baboon group (195–8). Finally, the chimps (including Buz) ambush the faction of their own troop represented by Mary Madelyn, Cohn and the infant Rebekah (207–210). Malamud presents the chimpanzees' all-too-human advance towards tribal warfare as the result of interaction between their own biological and social make-up – including both the pre-existing practice of occasional baboon-hunts, and non-monogamous sexual competitiveness – and Cohn's imposition of a humanist model of civilization, as represented by the sublimation of aggression and desire. By the end of the novel the chimpanzees have embarked on the same history of violence that led to the nuclear apocalypse with which the narrative began: they are led by a charis-

matic, messianic patriarch, Buz, and have a culture based around warfare with the rival baboon tribe and the metaphysics of sacrifice.

Inside the Skin of Another Species

The work of Leakey's ape-women and the primate language researchers has anointed great apes as spokespeople for the non-human world, witnesses to the damage wreaked by human enterprise, prophets of dire consequences and advocates for change. The pre-eminent example is Koko, the signing gorilla, explicitly styled by Penny Patterson as the animal kingdom's primate ambassador to humankind. Koko's diary of engagements includes an online web chat for Earth Day 1998, a video-link 'lecture' delivered to At-Bristol Natural Science Museum in 2004, an 'address' to the Children's World Summit for the Environment in 2005, and a DVD presentation to the American Bar Association in 2006 (Gorilla Foundation/Koko.org 2007).

Koko's ambassadorial role has many parallels in narrative fiction. Kafka imagined something of the kind in Rotpeter's address to an academy. In David Quinn's *Ishmael* the narrator recounts his telepathic conversations with a silverback gorilla who offers a history of human environmental depredation and an ecological philosophy for saving the world (1995). At the climax of *The Woman and the Ape*, the inauguration ceremony of the New London Regent's Park Zoological Garden is taken over by Erasmus and his kin, who deliver a warning to humanity to change its ways (Høeg 1996: 210–17). And in *God's Grace*, too, the final word is left to an ape: as the chimpanzees embark on their repetition of violent human history, the island's sole gorilla recites a Kaddish of mourning (Malamud 1982: 223). Meanwhile, in reversed form, the scenario of a 'dumb' animal speaking on behalf of its species to a 'civilized' audience occurs in Pierre Boullé's *La Planète des Singes*: astronaut Ulysee Mérou, marooned on the planet Soror, where great apes are dominant, learns their language and ends up addressing a conference of simian scientists (1966: 113–16). This inversion of the trope of animal ambassadorship of course echoes Gulliver's representations on behalf of his conspecifics to the monarch of Brobdingnag and the council of the Houyhnhnms.

Similar scenarios occur in *The Great Ape Project*, a collection of essays by an alliance of scientists and activists brought together to 'demand the extension of the community of equals to include all great apes: human beings, chimpanzees, gorillas and orang-utans', and to argue that 'certain basic moral principles' should pertain amongst this group of species, including the right to life, the protection of individual liberty and the prohibition of torture (Cavalieri and Singer 1993: 4–5). From a literary-critical point of view, the most noticeable thing about this volume is its persistent use of the trope of human–animal reversal. Drawing together the exchanges between humans and other apes enacted by twentieth-century primatology in the laboratory, the home and the field, but overruling the varied and contradictory motivations of individual primatologists, *The Great Ape Project* welds

them into a single political purpose. The book thereby extends the tradition of *Gulliver's Travels*, in which Swift also used unsettling narratives of human–animal reversal to broaden the notion of political responsibility to include populations considered beyond the pale.

The opening chapter of *The Great Ape Project*, by Goodall, begins as follows:

> [s]he was too tired after their long, hot journey to set to on the delicious food, as her daughters did. She had one paralysed arm, the aftermath of a bout of polio nine years ago, and walking was something of an effort . . . her eldest, the first pangs of her hunger assuaged, glanced at the old lady, gathered food for both of them and took it to share with her mother (in Cavalieri and Singer 1993: 10).

After three such vignettes Goodall comments that '[t]hose anecdotes were recorded during our thirty-one years of observation of the chimpanzees of Gombe, in Tanzania. Yet the characters could easily be mistaken for humans'. Having secured her readers' sympathy, Goodall details the characteristics shared by the two species: over 98 per cent of our DNA; societies in which individuals 'can make a difference to the course of . . . history'; the ability to 'learn by observation and imitation' and to pass new 'inventions' on to subsequent generations; the capacity for 'sophisticated cooperation' and 'true altruism' as well as for 'complex social manipulation', brutality, territorialism and warfare (10–13). Penny Patterson's chapter begins similarly, by presenting an 'individual' for her readers' 'consideration' who 'communicates in sign language, using a vocabulary of over 1,000 words'; has 'achieved scores between 85 and 95 on the Stanford-Binet Intelligence Test'; 'demonstrates a clear self-awareness by engaging in self-directed behaviours in front of a mirror'; 'engages in imaginary play'; uses appropriately terms like 'before', 'after', 'later', and 'yesterday'; 'grieves for those she has lost'; and has 'expressed empathy for others seen only in pictures'. Of course, this person – 'and she is nothing less than a person to those who are acquainted with her' – is Koko the gorilla (Patterson and Gordon, in Cavalieri and Singer 1993: 58–9). Other contributors to the *Great Ape Project* make use of more speculative human–animal reversals. Philosopher Raymond Corbey imagines the existence of populations of 'apes far more intelligent than humans' who have governments, industry and technology, and who live alongside a smaller, endangered population of humans, regarded by the apes as 'dull, uncivilized, and indeed unapish, lower beings'. Would it be right for the apes to hunt their neighbours, 'bringing back their hands and heads as trophies', display them in circuses and zoos, or experiment on them in laboratories (Corbey, in Cavalieri and Singer 1993: 126–7)? Similar conceits are deployed by Jared Diamond, Colin MacGinn and Harlan B. Miller in their essays (in Cavalieri and Singer 1993: 88, 146–50, 230–31). And Geza Teleki, in a chapter entitled 'They Are Us', recalls 'one evening in the Gombe hills' when he observed two

male chimpanzees, who upon seeing each other 'advanced as bipeds through waist-high grass to stand close together, face to face, each extending his right hand to clasp and vigorously shake the other's while softly panting, heads bobbing', after which they 'sat down nearby and we three watched the sunset enfold the park'. 'Nevermore', concludes Teleki, 'would I regard chimpanzees as "mere animals" . . . I had seen my species inside the skin of another' (in Cavalieri and Singer 1993: 297). The primary rhetorical tactic of *The Great Ape Project* thus entails locating the most valued qualities of humanist ideology – instrumental reason, aesthetic response, familial and community responsibility – inside the skin of other species.

This is what Swift does with his portrait of the genteel and enlightened Houyhnhnms, but of course he also reverses human and animal attributes in the opposite direction. Gulliver's description of the Yahoos identifies the qualities vilified by humanism as bestial – slavishness to instinct, insensibility to finer feelings, irrationality, technological incapacity – inside the skin of humans or hominid beings. An extended recent instance of this kind of reversal is provided by Will Self's *Great Apes* (1997). Self's satire centres upon Simon Dykes, a member of the upper-middle-class artistic elite in London in the late twentieth century, who one day wakes up in a world in which chimpanzees are the dominant and 'civilized' species. The novel switches between his perspective and that of chimp psychologist Zack Busner, who is called on to treat Simon after the latter has been taken to a psychiatric facility, 'seriously disturbed', possessed by the delusion that he is human, 'that the whole world was run by humans' and that 'he had gone to sleep with his human lover and when he awoke the following morning she was a chimpanzee and so was everyone else in the world' (Self 1997: 77–8). The narrative follows Simon's painstaking adaptation (or re-adaptation) to what it calls 'chimpunity'. Unlike *The Great Ape Project*, *Great Apes* has no discernible political aim: its main commitment is to follow the ape-human reversal to its rhetorical limits, in a display of satirical virtuosity. For example Self enjoys pongizing all the key milestones in modern representations of chimpanzees. In his search for the source of Simon's delusion, Busner examines 'Edward Tyson's classic anatomical study – published in 1699 – of an immature human specimen brought from Angola'; a series of 'eighteenth-century satires, pitting evolved humans against primitive apes', including both *Scriblerus* and 'Swift's Yahoos'; Linnaeus' classification of 'the human as a species of chimpanzee' to which he assigns the name '*Pongis sylvestris* or *Pongis nocturnes*'; a film called *Planet of the Humans*; scientific studies like Robert Yerkes' 1927 classic, 'titled simply *Humans*'; 'the biographies of Washoe and the other famous humans who had been taught to sign by the Fouts'; Jane Goodall's studies of 'the wild humans of Gombe', and Leakey's famous comment that '[n]ow we must redefine *tool*, redefine *chimpanzee* – or accept humans as chimps!' (vii, x–xi, 262–3, 265 273, 325).

Alongside the enjoyment of isomorphic exchanges of human and chimpanzee elements, the most sustained aspect of Self's reversal involves the substitution of fundamental Western social forms – the nuclear family and

couple-based monogamy, along with associated gender, class, educational and workplace hierarchies – with a chimpanzee society determined solely by reproductive instincts and biological hierarchies. The pongid culture of *Great Apes* is based on dominance-and-submission patterns between the alpha chimp and his various subordinates. So, in a parody of Freudian transference, the breakthrough in Simon's treatment comes when he and his therapist come to blows. After a 'brief scrimmage' of biting, hitting and screeching, Simon submits to Busner and the two engage in his 'first grooming session since the breakdown' (Self 1997: 215). Self reinterprets psychoanalysis through Goodall's accounts of hierarchical negotiations amongst chimpanzees, which are often characterized by sudden outbursts of aggression followed, once a relationship has been affirmed, by grooming to re-establish social affiliation (Goodall 1971: 112–13, 122–3). 'Busner's fingers as they played upon Simon's body were tender, placatory. "You get out the fear, get out the hurt, the anger. Attack me by all means – that's very chimp, very chimp indeed"' (Self 1997: 215). Simon experiences a further 'revelation of chimpunity' when confronted by an aggressive male stranger. Feeling 'the fur at the nape of his neck stiffen and bristle – a sensation which he had never consciously experienced before', he utters 'a series of aggressive barks, while drawing himself up to his full height', before leaping 'for the lowest bough of the first plane tree' swinging himself up and continuing his retreat 'brachiating as a chimp to the canopy born' (291–2). Re-accommodation to the chimpanzee world thus depends on accepting that instincts determine social behaviour: 'Simon was taken aback – literally – by the way his body automatically understood which apes he should present to' (302).

The association of 'chimpunity' with automatic response draws on behavioural psychology, the most faithful contemporary descendant of the Cartesian beast-machine, which views animals, including humans, as engineered by evolutionary selection to respond to stimuli in certain ways. Behaviourists have often used mechanistic metaphors to describe the hormonal, neurological and other physiological systems by which the stimulus-response pattern operates: Konrad Lorenz alluded to hydraulic mutual-feedback systems, while later generations made reference to cybernetics (Haraway 1989: 140). The result, according to Scholtmeijer, is 'a fundamentally devitalized animal', which is 'thoroughly conquered' by its reduction to 'a system of behaviours to be isolated, manipulated, and tabulated' (1993: 73). This is also the theory that underlies *Life of Pi*. Martel's narrator conquers the tiger because his observation of animals in Pondicherry Zoo, and his degree in zoology, have taught him the formulae that govern their behaviour. Hence 'flight distance, which is the minimum distance at which an animal wants to keep a perceived enemy', can be expressed in mathematical figures: three hundred yards for a flamingo, thirty for a giraffe, ten for fiddler crabs, and so on (Martel 2002: 39). Combining this calculus with a theory of dominance and submission, Pi engages in a classic stimulus-response experiment, rocking the boat and

blowing a whistle 'until the association in the animal's mind between the sound of the whistle and the feeling of intense, incapacitating nausea is fixed and totally unambiguous. Thereafter, the whistle alone will deal with trespassing' (205). Pi's 'super-alpha male' status is established over the feline beast-machine by behaviourist programming (43).

Great Apes portrays another form of biological determinism even more powerfully: namely, an overriding sexual instinct operating entirely in the service of reproductive and genetic considerations. The chimps regard monogamous pair-bonding as a bestial (that is, human) aberration, 'perverse because it confers no apparent genetic advantage' (Self 1997: ix). In their world, promiscuous coupling is the only socially responsible form of sexual behaviour. Observing a mass-mating of chimpanzees in Regent's Park, Busner describes it to Simon as a manifestation of 'the absolute core . . . of chimpunity itself' (293). Imagining a society entirely shaped by sexual impulse allows the achievement of Self's main satirical objective, when the reversal is itself reversed. Asked by Busner whether 'all human consortships last a lifetime', or whether the principle of '[e]xclusive mating rights' is always respected, Simon has to reply in the negative, admitting that 'the exogamous matings' occurring outside human couple relationships are often 'involuntary – driven even. The human impulse towards inconstancy seems as strong as the drive to consort'. Busner concludes, 'it looks to me much the same as what chimpanzees get up to "huuu"?' (294–5). Unable to explain the difference between chimpanzee and human sexual behaviour – in a conversation reminiscent of Gulliver's attempts to persuade the Houyhnhnms that he is not a Yahoo – Simon has to accept the two species are more alike than they are different. Hence, at the core of Self's novel, providing the structural fulcrum which bears the comparison between human and chimp, and which swivels satirically to produce similarity out of apparent opposition, is a theory of shared human–animal behaviour based on the drive to reproduce as a means to perpetuate genetic heritage.[21]

In short, Self's satire draws upon a crude version of evolutionary psychology, a paradigm whose current dominance can be traced to the 'new physical anthropology' inaugurated by Sherwood Washburn at the University of Chicago in the 1950s. Combining 'field studies of wild primates and of living human hunter-gatherers' with 'the ongoing work on African hominid and hominoid fossils', and undertaking comparative behavioural studies of primates to connect biology and anthropology, Washburn's synthesis breathed new life into the figure of 'Man the Hunter' as the embodiment of humankind's emergence from its apelike forebears (Haraway 1989: 187, 211–12). This narrative provided an apparently universal, scientifically authoritative account of what it means to be human, consistent with the ideological mood of post-war Western societies. It imagined a biological basis for society according to which men were abroad, cooperating and competing, inventing weapons and pursuing material gain, while women stayed at home, preparing meals and rearing children.

In the context of the Cold War, 'this Man the Hunter was liberal democracy's substitute for socialism's version of natural human cooperation... His technology and urge to travel would enable the exchange systems so critical to free world ideology' (187). Like H. G. Wells, Washburn emphasized 'plasticity', the capacity for cultural invention, as the unifying feature of the human species, thereby transcending the racial divisions of prior anthropological generations as well as reinstating the supremacy of humans over other animals. Tool-use, especially in hunting, epitomized an innate human technological and entrepreneurial genius (200, 208). Once again, Martel's *Life of Pi* provides – like a latter-day *Robinson Crusoe* – a compression of this conjectural history. The vegetarian Pi, if he is to survive, must learn to hunt with voracity and inventiveness if he is to compete successfully against his fellow-predator, Richard Parker.

Following Washburn's intervention, the 1960s and 1970s saw the popularization of narratives about the difficulties faced in contemporary environments by Man the Hunter: problems resulting from 'eruptions of his violent natural propensities in a crowded world', and the challenges of 'creating social stability and happy families in the face of modern perverse refusals to follow nature's laws' (Haraway 1989: 127). The *Planet of the Apes* films and television series can be understood in this context. Whereas Boullé's novel, which is mainly a critique of French Cartesianism, portrays Soror's pongid society as technologically advanced, rationalistic and civil in the modern sense, the American screen adaptations recast the ape world as brutal and pre-scientific, creating a Wellsian parable about atavistic inhumanity that was consistent with Washburn's hypothesis. This cruder version of evolutionary psychology was, however, sophisticated in 1975, when E. O. Wilson's *Sociobiology* announced a renewed emphasis on 'the genetic aspects of social strategies', which might be enacted by a range of participants, both female and male, dominant and non-dominant. As Haraway puts it, '[p]rimates became ideal yuppies' in this new sociobiology which, with its talk of 'energy budgets, foraging patterns, genetic investment possibilities, sexual deceit payoffs, social manuevers', tied the (supposedly biologically determined) behaviour of humans and other apes ever more closely into the *Zeitgeist* of corporate and consumer capitalism (128).

According to Annabelle Sabloff, 'the primary error' of sociobiology lies in representing 'all non-human animal behaviours [as] inherently simple: virtually completely genetically determined, without agency or flexibility, without interior complexity or emergent social organization' (2001: 32). Hence, for example, a paradigm that locates essential behaviour in the drive to reproduce genetically will reduce sexual behaviour to its most conventional form: heterosexual procreation (Birke 1994: 105–6). This is certainly the case in Self's novel, where chimpanzee sexual behaviour is overwhelmingly determined by female oestrus, and confined to vaginal intercourse. Yet feminist primatologists have shown that in fact, among primate species, both females and males initiate intercourse when the former is not in oestrus, or when she is already pregnant. Moreover,

females often show preference for low-ranking males, who within a strictly evolutionary model would constitute a poor genetic investment (Noske 1997: 116–17). And of course a large variety of same-sex activities occur very commonly amongst apes of all kinds (Bagemihl 1999: 277; Balcombe 2006: 113–15).

In accordance with the sociobiological paradigm, the chimpanzees in *Great Apes* (considered apart from the social superimpositions allowed them by the satire, which are of course borrowed from human modernity) are reduced to fighting, copulating instinct-machines. It is no doubt because of Self's reductive perception of animality that, despite the dominance they enjoy in their pongid world, his chimps remain objects of ridicule, more like apes in circuses than anything. Simon's view of a family at dinner reminds him of 'chimps' tea parties at the zoo'; elsewhere he recalls the television advertisements for PG Tips tea, which featured clothed chimpanzees dubbed with comic accents (Self 1997: 111, 158, 183, 186, 238). If there is humour here it arises from derision of animality rather than from satire against humanity, from a contempt for 'the animals with their scraggy rumps, their bandy, old men's legs, their ears bracketed with field mushrooms . . . their arses in each other's muzzles, their digits in each other's fur' (183). Once Simon becomes acculturated to his new (or prior) chimpanzee identity, this repugnant animality is transferred to the humans he sees in zoos and wildlife sanctuaries. The *Homo sapiens* observed by Simon at the zoo are insentient and beastly in the crudest sense; their eyes 'utterly without the least flicker of rationality', 'their porcine muzzles . . . devoid of feeling or expression', their speech no more than 'a low, throaty roar' (249, 250). When at the end of the novel Simon and Busner travel to Africa, the 'wild' humans they see are just as witless and brutal. They visit a research station and rehabilitation centre – an amalgam of Goodall's research station at Gombe, Fossey's Karisoke and Galdikas' Camp Leakey – run by controversial primatologist Ludmilla Rauhschutz, who describes the privilege of being able to hear 'the human night chorus, possibly one of the most awesome and profound noises there is in nature'; their 'nesting vocalization' is a 'tender exhortation by the male humans to the females, saying that the night shelters are prepared and it is time for mating activity to begin' (396–7). But as Busner and Simon listen expectantly, the cries of the humans, echoing around them in the jungle, are rendered as 'Fuuuuuuckooooofffff-Fuuuuuuuckooooofff' (396). Despite Rauhschutz's insistence that 'wild humans [are] both sentient and intelligent', when they gather for feeding time at the camp, the humans appear as 'zombie-like' as the zoo specimens, standing 'knock-kneed, slack-jawed, arms akimbo, eyes glazed' (385, 399, 400). The only one who shows any 'spunk' is a young red-haired male who empties the sugar bowl into his mouth and then begins 'to stagger around in small circles, mewling and bellowing, "Fuckoff-fuckoff-fuckoff". He fetches up by the wall of the main hut, which he proceeds to 'rhythmically bash with his hydrocepahlic brow' – at which sight Rauhschutz comments 'with frank admiration', 'Hooo' see, the force

and accuracy with which he butts the wall. I think it fair to sign that he seems to have a profound comprehension of the laws of physics' (401–402).

Obviously the target of this mockery is not actual human beings, to whose behaviour these incidents bear little relation. Rather, the final chapters of Self's novel ridicule recent attempts to argue that non-human animals' capacity for thought and feeling is greater than previously allowed by positivist science. In fact, *Great Apes* concludes with a satire aimed directly against the political intervention represented by *The Great Ape Project*. Rauschutz, the radical primatologist, is a crass stereotype of the lesbian feminist: a mannish tyrant, 'obese', with a 'disturbingly flat and animal' muzzle and 'close-cropped head fur' (388), who runs her camp 'along the lines of an old colonial district commissioner' (394). Equally crude is Self's caricature of a group of Dutch chimps visiting the camp from a 'pressure group denoted "The Human Project", the aim of which was to secure limited chimpanzee rights for wild and captive humans' (393). These chimps move with delight among the gathered humans, who nevertheless remain 'totally unresponsive' to attempts at contact, 'merely garbling incoherently in their swinish way, "Fuckoff-fuckoff-fuckoff-fuckoff", over and over' (400).[22] Reading *The Great Ape Project* alongside *Great Apes* demonstrates the radically different effects that can be generated by the human–animal reversal. *The Great Ape Project* uses reversal to argue for a measure of political equity between humans and other apes. In Self's novel, on the other hand, the intention seems to be the humbling of human pretension, but the satire actually reinstates a conventional hierarchy between human and animal. In contrast to the anthropoluotic impact achieved by Swift's human–animal reversals, or those of Kafka, Brophy, Malamud and the contributors to *The Great Ape Project*, all of which loosen the restrictive definitions of both human and non-human being, Self's inversion of *Homo* and *Pan* affirms a reductive and biologically deterministic account of human being, while consigning animal being to an ultra-Cartesian insentience and insignificance.

The Place of Sympathy

Contrasting these two texts highlights another of the most contested features of contemporary human–animal narratives: the question of taste. *The Great Ape Project* expresses a sympathetic and sometimes sentimental identification with the experience of other animals; *Great Apes* relentlessly mocks any such disposition. This distinction marks a line of conflict between alternative legacies: on one hand the Enlightenment, Romantic and Victorian genealogy of inter-species sympathy, and on the other, the distaste for sentimentalism which is shared by both science and modernism. For novelists dealing with human–animal relations, the antipathy between these traditions poses a dilemma. Two exemplary, but very different, responses are demonstrated by Coetzee's *Disgrace* and Findley's *Not Wanted on the Voyage*. Coetzee evades the contemporary suspicion of human–animal

sentiment by overleaping its nineteenth- and twentieth-century manifestations and drawing instead upon the prior tradition of sympathy as a radically disconcerting disposition (Lamb 2001), while Findley embraces the genre of sentimental narrative, but puts it to work in radical ways.

As an academic, Coetzee's David Lurie has dedicated his career to abstract thought, the dominant intellectual tradition of modernity. When dealing with Romanticism, he encourages his students to read Wordsworth's lines about Mont Blanc as a meditation on '[t]he great archetypes of the mind, pure ideas' (Coetzee 2000: 21–3). Both the mountain and the Platonism invoked here recall Shelley's critical portrait of Victor Frankenstein. As in that case, Lurie's abstractionism licenses him to neglect the impact of his actions on other lives and bodies. He justifies forcing himself on Melanie Isaacs by invoking the power of Eros and the feminine divine, or by appealing to behaviourist theory, arguing that the suppression of his sexual instinct would make him 'hate [his] own nature', like the next-door neighbours' dog, beaten for his amorous adventures (52, 89–90). After his own daughter is brutally raped, the same habit of thought inhibits Lurie's ability to understand her response. 'You keep misreading me', Lucy tells her father; 'I don't act in terms of abstractions' (112). It is only the non-logical, unreasoned, counter-intellectual path of disgrace that eventually offers a corrective to the limitations imposed by abstractionism. Helping Bev Shaw euthanize unwanted dogs, Lurie is overtaken by a form of affect he cannot comprehend.

> He had thought he would get used to it. But that is not what happens. The more killing he assists in, the more jittery he gets. One Sunday evening, driving home in Lucy's kombi, he actually has to stop at the roadside to recover himself. Tears flow down his face that he cannot stop; his hands shake.
>
> He does not understand what is happening to him (142–3).

The form of sympathy that possesses Lurie, so that '[h]is whole being is gripped by what happens in the theatre', cannot be dealt with intellectually (143). He identifies with the bodily reactions of the dogs, who flatten their ears and drop their tails 'as if they too feel the disgrace of dying' (143), and even with their stiffened corpses, which he incinerates because he can't bear to see them roughly handled by the hospital workers. Trying to analyse his actions, Lurie can only think that '[h]e saves the honour of corpses because there is no one else stupid enough to do it. That is what he is becoming: stupid, daft, wrongheaded' (146). Identifying with the dumbness of dumb animals, even dead animals, Lurie embodies a disposition that invalidates the privilege of abstract reason as practised by university professors.

Lurie's story parallels the critique put forward in *Elizabeth Costello*: that the rationalist tradition from Descartes to Köhler and beyond, along with modernist primitivism and contemporary ecological managerialism, serves our understanding of animals poorly by rendering them in Platonic terms.

Against this tendency Costello poses the sympathetic imagination, which allows humans to identify with 'any being with whom [we] share the substrate of life' (Coetzee 2003: 80). She describes the condition shared by humans and other animals as 'fullness, embodiedness', the 'heavily affective sensation . . . of being a body with limbs that have extension in space, of being alive to the world' (78). In the final chapter of this novel, which seems to take place in purgatory after Costello's death, she has to give a statement of belief to a board of judges before she can pass on. After one failed attempt, she tells the board about a population of small frogs living in the Dulgannon River in Victoria, Australia. Her account emphasizes the frogs' suspended animation in 'tombs' of hardening mud during the dry season, followed by their revivification when the rains come 'rapping, as it were, on thousands of tiny coffin lids' (216). This story is a refusal of both abstractionism and simple realism. Despite her rhetoric, Costello insists the tale is 'no allegory': she is not using the frogs to refer to an abstract principle, such as faith in resurrection or in the power of life. But neither is she merely attesting to a material reality beyond the human. Rather, she insists, it is 'because of the indifference of those little frogs to my belief . . . that I believe in them' (217). Costello's statement is a declaration of anti-anthropocentricism – she believes in a form of non-human life that 'does not bother to believe in me' (218) – and a testimony to the radical power of the sympathetic imagination. For she can imagine the being of these creatures whose existence has nothing to do with hers, a condition moreover that blurs the distinction between life and death itself. Thinking 'of the frog beneath the earth', she

> thinks of the mud eating away at the tips of those fingers, trying to absorb them, to dissolve the soft tissue till no one can tell any longer (certainly not the frog itself, lost as it is in its cold sleep of hibernation) what is earth, what is flesh. Yes, that she can believe in: the dissolution, the return to the elements; and the converse moment she can believe in too, when the first quiver of returning life runs through the body and the limbs contract, the hands flex (219–20).

If Lurie's abstractionism recalls that of Frankenstein, Costello's feeling for the Dulgannon frogs recalls the Romantic theory of organic sympathy and the Creature in whom Mary Shelley embodies it. Costello's imaginative inhabitation of the frogs' decay into earth, and the return of life from that decay, mirrors the Creature's emergence into life from the reanimated flesh of corpses, and his return to the elements at the conclusion of Shelley's novel. It is this most radical form of sympathetic identification – based on the experience of flesh amid the flesh of the world – that also leads Costello to claim that '[f]or instants at a time . . . I know what it is like to be a corpse', and to insist that such knowledge 'is not abstract . . . but embodied. For a moment we *are* that knowledge' (76–7 italics in original).[23]

Yet there remains one limitation that Coetzee imposes on his characters' sympathetic identifications with animal otherness. He works hard to

prevent their slipping from sympathy into sentimentalism, as that word is currently understood – that is, he avoids any hint of clichéd, shallow, manipulative, cloying or easy forms of emotional affect. Instead he focuses on the most uncomfortable forms of sympathetic identification – with corpses, or with unloved and nameless dogs, or indeed with the corpses of anonymous dogs – and his protagonists' thoughts remain habitually bleak, sardonic and unrelenting.[24] At one point in *Disgrace*, Lurie even pauses to reassure himself that '[h]e is not, he hopes, a sentimentalist' (Coetzee 2000: 143). This dedicated anti-sentimentalism also helps explain the novel's grim ending: Lurie's decision to euthanize the affectionate dog Driepoot exemplifies Coetzee's determination to distinguish the form of sympathy that interests him from the emotional gratification commonly associated with sentimentalism.[25]

Certainly, there are few narratives more likely to be dismissed as sentimental than that of a lovable animal saved from death and given a happy home, or that of the creature whose affection brings warmth to a cold heart. Indeed more generally, as James Serpell puts it, 'the accusation of sentimentality' is typically levelled against '[p]eople who display emotional concern for animal suffering' or 'those who allow themselves to become emotionally involved with companion animals' (1996: 170). In *Not Wanted on the Voyage*, however, Timothy Findley shows no qualms about deploying, without ironic undertones, the techniques of sentimental narrative, characterization and tone. Emotional climaxes are created from events like the rescue of the blind, pregnant, aging and abandoned cat Mottyl. The animal characters talk, have names and are endowed with (apparently) anthropomorphic personality traits and (supposedly) human virtues – including levels of courtesy, restraint and cooperation that reflect unfavourably on the human protagonists. Their number includes figures from fairy tales and children's stories: unicorns, faeries, dragons. There is a clear characterological distinction between virtue and villainy, expressed in melodramatic costume dramas that draw on pantomime traditions, such as the revolution of the lower orders, including the flamboyantly transgendered Lucy, the gin-soaked Mrs Noyes, and a sack of giggling demons, against the robed, white-bearded patriarch Noah and his brutal, blue-skinned warrior son Japeth. There are also incidents of fantastic gruesomeness: infanticide, massacre, vivisection, rape and incest. Yet Findley's is a postmodern sentimentalism, wherein the kinds of popular narrative that modernism deplored – stories of human–animal tragedy and triumph, melodramatic horrors, childlike fantasies and nostalgic appeals – are re-accessed in ways that eschew the manipulated, clichéd or easy responses conventionally associated with them.

Not Wanted thus returns to the tradition of nineteenth-century radical sentimental narrative, and rejects its subsequent discrediting by modernism. According to Philip Fisher, it is typical of sentimental narrative to evoke events 'in the deep past' which have 'left irreversible damage'. Because such stories 'invite no compensation and provide no hope of

redress', they offer that 'training in pure feeling and response' which is 'at the heart of sentimental politics' (1985: 108, 121). Findley, of course, revisits one of the most ancient and best-known of all narratives, and since the outcome is decided in advance, instead of offering redress for the dominion represented by Noah, the novel invites new responses to it. Hence, the revolt of the lower orders that concludes *Not Wanted* is 'a draw', with 'no decisive victory', 'defeats on both sides', and memories that hang 'like a knife between them' (Findley 1984: 348). The flood and the ark have rendered irrevocable the division between humans and other animals (Tiffin 2001: 36–7). The barricade between the lower and upper decks, although literally breached, remains in place in a different form: when Mrs Noyes brings the sheep above deck to teach them a new song – since their previous favourite, *Lamb of God*, has taken on connotations of sacrifice – she finds they no longer share a common language (345–7). Noah proclaims 'that everything that lived and breathed and moved had been delivered into [human] hands – *forever*' (351 italics in original). On the other hand, the patricarch's supremacy has been exposed as both provisional and artificial. Mottyl has survived, as have all her kittens except one. Readers' reactions to particular incidents are likely to be similarly unstable. The novel invites them to feel disturbed by the slaughter of the child Lotte, but also to grieve at the death of Crowe or the Unicorn. Indeed, any dismay felt at the repeated killing of children – Japeth's twin, Lotte, and the baby born to Hannah – cannot be separated from sympathy for non-human species, since these are all 'ape-children', emphatically both human and animal. Moreover Findley's portrayal of the ark's lower decks binds together the plight of prisoners, children, animals and slaves – the same classes that became the focus of the nineteenth century's social conscience and so of its sentimental fiction (Fisher 1985: 94–5).

As Fisher argues, for much of the last century and more, the suspicion of sentiment has enforced a counterproductive separation between literary and popular narratives, as epitomized by the modernist belief that 'art invented patterns of feeling' while popular narratives 'soothed by means of the familiar' and 'dulled the sensibilities that art made lively'. The result was a literary, artistic and scholarly ignorance of the socially transformative potential of 'popular forms' to 'mass . . . small patterns of feeling in entirely new directions' and to pioneer 'exotic configurations of experience as a necessary practice for a transformation of moral life that is approaching' (1985: 19–20). And yet, of course, outside the boundaries of high culture and scientific practice, in the everyday lives of most people, sentimental engagements with animals never lost their intensity or potential for unconventional effects. Emotional proximity between people and their companion animals, for example, remained a major generator of sympathy and sentiment from the eighteenth century onwards (Thomas 1984: 119; Serpell and Paul 1994). Sabloff discusses some of the more subversive and unpredictable effects produced by companion animal relationships: 'pets' training their 'owners' in ways the latter might not even notice; the release

of certain social prohibitions, for example against nurturing behaviour amongst men; the licensing of transitory forays into the animality of human nature; and the increased awareness of animals' perceptions, sufferings and pleasures (2001: 53–84). The political function of sentimental imagery has remained similarly versatile. The iconography of the Old Brown Dog, which became the focus for the anti-vivisection battles of the turn of the twentieth century, demonstrates the potency of such representations (Lansbury 1985: 3–26). Even Disney's saccharine creations – despite Berger's claim that they merely transform animals into 'human puppets' and thereby confirm the 'pettiness of current social relations' (1980: 13) – can have the effect of destabilizing the smooth career of capitalist modernity. The film *Bambi*, surely a high-water mark of sentimental iconography, has played a formative role in the production of generations of environmentalists and animal rights activists (Cartmill 1993: 179–88). Similarly, during the mid 1990s, the image of the baby veal calf, 'a kind of "Bambi" figure', with 'big eyes and long eyelashes', motivated members of the public who were 'not regular political activists' to protest against the export of British calves to Europe (Fudge 2002a: 39). Subversive use of kitsch animal imagery is also common among animal rights activists, for example anti-vivisection protestors dressing as Mickey Mouse outside laboratories using rodent animal models (Baker 2001: 226–31). As Steve Baker puts it, '[s]entimentality *matters*', precisely because it embodies ways of living 'inexpertly with animals' (Baker 2000: 177, 179), that is, the kinds of human–animal relation undertaken by those Sabloff calls 'people without natural history', the large social majority whose interactions with animals have never been dictated by the 'grand metaphors of the modern age', whether scientific or aesthetic (Sabloff 2001: 143 italics in original).

It seems appropriate to end this study with this reminder of the severely disabling effect that regimes of taste can have on the socially transformative function of literature. The fictions of Coetzee and Findley, and many others discussed in this chapter, demonstrate an emerging determination to dismantle such regimes, in order to re-engage literary fiction with the most vital and intimate of contemporary structures of feeling. They also suggest that today, living inexpertly with animals and our own animality amidst the ruins of modernity, we are especially in need of narratives that attempt translation between the animals we are and the animals we aren't.

Notes

5 Animal Refugees in the Ruins of Modernity

1 The most famous example is 'Earthrise', taken by Apollo 8 astronaut William A. Anders from the lunar orbit on 24 December 1968, described by American nature photographer Galen Rowell as 'the most influential environmental photograph ever taken' (Zimmerman 1998: 242).
2 Graham Huggan makes the same point in his extended and suggestive reading of Gowdy's novel (2004: 714–19).
3 This is, for example, the way June Dwyer reads Martel's novel (2005).

4 For discussion of the implications of such incidents see Tiffin (2007a).
5 Ashcroft, Griffiths and Tiffin emphasize the classifying and legislating dimension of Noah's role in *Not Wanted* by reading his name as 'Doctor No/Yes' (1989: 99).
6 Zinc is an element frequently used in alloys.
7 The 1994 edition of *Dorland's Illustrated Medical Dictionary* still defines 'sacrifice' as meaning 'to kill an experimental animal' (Anderson 1994: 1,479). See also Birke, Arluke and Michael (2007: 100).
8 Many readings have been offered of this novel, and especially its final scene. My own perspective owes much to Lucy Graham's discussion of sacrificial metaphysics and animal embodiedness in *Disgrace* (2002); for an approach that is in many ways complementary see also Attridge (2004: 174–91).
9 The phrase comes originally from Isaiah 53.7; in the Christian tradition it is conventionally interpreted as a reference to the self-sacrifice of the Messiah.
10 In *Silent Spring* Rachel Carson suggests that agricultural and garden chemical treatments 'should not be called "insecticides" but "biocides" (1962: 8).
11 Indeed Patterson argues that the animal rights movement has been significantly shaped by those 'whose advocacy of animals has been influenced and in some cases shaped by the Holocaust', including survivors and children of survivors – for example Isaac Bashevis Singer, whose remark that 'for the animals it is an eternal Treblinka' gives Patterson's book its title (2002: 183).
12 For comparable challenges to the distinction between urban and natural worlds, and between the domestic and the wild, see Jennifer Wolch's article 'Zoöpolis' (1998: 125) and Barney Nelson's *The Wild and the Domestic* (2000).
13 Baker here deploys a phrase from Gilles Deleuze and Felix Guattari, '*une ligne de fuite*', which can be rendered in English either as 'line of flight' or 'line of escape', and which indicates an unexpected, radical and tangential escape from conventional systems of control (Baker 2000: 117–19).
14 Chris Philo and Chris Wilbert coin the term 'beastly place' to describe what occurs when non-human species transgress the 'animal spaces' by which human societies seek to order them (2000).
15 See for example Merchant (1980: 217–30), Scholtmeijer (1993: 296–7) and Sabloff (2001: 146).
16 Costello's examples of recalcitrant non-human agents include the very animal, the rat, most commonly forced into service as the 'hero of science' in laboratory experiments (Burt 2004).
17 Snowman's dream of Alex's final departure may come true. African Grey parrots have become so popular as pets, because of their strong capacity to express themselves in human terms, that 'trade in the birds is driving them to extinction in an increasing part of their range' (McCarthy 2006).
18 I am grateful to Mandala White for drawing Latour's book, and especially this passage from it, to my attention.

19 Buz also recalls Sugito, Biruté Galdikas' favourite adoptive orang-utan child at Camp Leakey, who at the age of seven began drowning his orphan 'siblings', which Galdikas considers 'the dreadful consequences of inadvertently raising an orang-utan as a human being', since the oedipalized Sugito 'was acting out his jealousy of the infants who had seemingly replaced him in my affection' (1980: 832).

20 The chimpanzees of Gombe have been subject to more powerful human-made pressures than those produced by Goodall's inadvertent exacerbation of competition for food. Towards the end of *In the Shadow of Man* Goodall laments the hunting and sale of chimpanzees for meat, 'the spread of agriculture and forestry', and the transmission of human diseases to chimps as a result of the growing proximity between the two species (1971: 228–9). Three decades later Gombe Reserve, an area no larger than thirty square kilometres, is an island of green in a landscape otherwise entirely deforested to provide farmland, firewood and shelter for the people of the nearby villages and camps full of refugees from civil wars in Burundi and Congo.

21 Finding the core of both chimpunity and humanity to be constituted by aggressive and sexual instincts, Self 's novel echoes, respectively, the negative therio-primitivism of Aldous Huxley's *Ape and Essence* (1949) and the bawdy racism of John Collier's *His Monkey Wife* (1930). Annamarie Jagose's 1998 novel *Lulu* represents the same legacy. Based on the story of Lucy Temerlin (Fouts and Mills 1997: 145–55), it depicts the oedipal relationship between husband-and-wife researchers and a young chimp taken into their home for linguistic and psychological research.

22 Steve Baker argues that Self is not 'entirely hostile' towards the political aims of movements like the Great Ape Project, suggesting the real target of this 'uncomfortable episode' is 'the stupidity of unthinking identification' between humans and other animals in the hope of 'merely *wishing away*' the dividing line between species (2000: 161–2 italics in original). While this pinpoints the source of Self 's derision, I would add that his novel underestimates the epistemological basis of the Great Ape Project, while remaining blind to its own reductive dissolution of the chimp–human barrier through reliance on sociobiological essentialism.

23 As Lamb argues, Costello struggles to find words with which to express the extra-linguistic 'case of metamorphosis that arises from unlimited sympathy with animals' (2006: 177).

24 Graham Huggan, in an otherwise insightful reading of Coetzee, demonstrates the tendency to confuse sympathy and sentiment when he comments that Elizabeth Costello is 'sentimental to a fault' (2004: 712).

25 See Oerlemans for a comparable reading (2007).