CHAPTER 4

Evolution in the Tropics
Neo-Victorian Fictions
(A. S. Byatt, Andrea Barrett, David Mitchell)

Alfred Russel Wallace lies sleeping uneasily in his cabin aboard the sailing ship *Helen* 700 miles off the Bermuda Islands, bound for England and home. He has been burning with fever for the last few days and is still feeling weak when the captain enters the cabin and says, "I'm afraid the ship's on fire. Come and see what you think of it." At first the smoke, thick though it is, does not seem threatening. But soon the *Helen* is engulfed by flames, and the crew and passengers clamber into the boats where they watch helplessly as the fire consumes their ship. Wallace writes: the flames

> rushed up the shrouds and sails in a most magnificent conflagration. Soon afterward, by the rolling of the ship, the masts broke off and fell overboard, the decks soon burnt away, the ironwork at the sides became red-hot . . .. It now presented a magnificent and awful sight as it rolled over, looking like a whole caldron of fire, the whole cargo of rubber forming a liquid burning mass at the bottom. (Wallace 87, 90)

Wallace has lost almost everything and is fortunate to escape with his life. The fruits of four years labor on his first expedition – most of his journals, his drawings, his splendid collections of insects and birds, and worst of all, the live animals he was conveying, monkeys and parrots and other tropical birds – all lost. Only one parrot falls into the water and is picked up. Wallace struggles to preserve its life in the overcrowded boat, but it too dies. This terrible event haunts Wallace for the remainder of his days. The loss of his collections, which would have meant financial independence for a young naturalist, the loss of the animals and birds, the loss especially of the parrot – they return in his autobiography as ghosts of what might have been.

Wallace's fire at sea reappears in two remarkable works of neo-Victorian fiction, A. S. Byatt's novella "Morpho Eugenia," which forms the first half of her 1992 book *Angels and Insects*, and Andrea Barrett's "Birds with No Feet," a story from her National Book Award–winning collection *Ship*

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Fever (1996). Both center on fictional naturalists who meet and correspond with Wallace in the South Seas; both mention that Wallace's bad luck seemed to guarantee their safe passage home; and yet both lose their collections, nearly their lives too, in shipwrecks at sea. Barrett's description echoes Wallace's experience in striking detail, writing of the live animals trapped below deck, the birds wheeling in circles and then diving into the flames, even of a pet sloth, plucked out of the water, only to die later in the lifeboat.

These two stories about Wallace are only a fraction of the neo-Victorian fiction that deals with nineteenth-century voyages to the tropics. Anglophone authors whose cultural heritage circles the globe – England, America, Australia, New Zealand, and South Asia – have illuminated globalization today by juxtaposing it with Queen Victoria's empire. Merely to list the most notable of these works is to register a surprising conjunction: Peter Carey's *Oscar and Lucinda* (1988) and *Jack Maggs* (1998), A. S. Byatt's *Angels and Insects* (1992), Andrea Barrett's *Ship Fever* (1996), Roger McDonald's *Mr. Darwin's Shooter* (1998), Matthew Kneale's *English Passengers* (2000), Daniel Mason's *The Piano Tuner* (2002), David Mitchell's *Cloud Atlas* (2004), Sebastian Faulk's *Human Traces* (2005), Harry Thompson's *This Thing of Darkness* (2006), Lloyd Jones's *Mister Pip* (2006), and Amitav Ghosh's *Ibis* trilogy (2008–2015).[1] Darwin and Wallace are prominent in many of these fictions, although H. G. Wells's *Island of Doctor Moreau* appears often as well, and even Dickens demonstrates the power of his legacy in *Jack Maggs* and *Mister Pip*.

Although many neo-Victorian novels are set in England, most of the books that feature Darwin or Wallace take place in the tropics, no doubt because of the naturalists' formative voyages to the region. Cannon Schmitt argues that for many in the nineteenth century, "the tropics *are* nature . . . not simply because they offer the spectacle of intense struggle and diversity but also because" they represent "a remnant of the past that has survived into the present" (19, italics in original). To this, I would add that the tropical setting of these neo-Victorian novels draws attention to the global reach of Western imperialism and poses vivid examples of the risk explorers, missionaries, and merchants posed to sensitive ecologies – issues that came up in the writings of the naturalists at the time and remain pressing concerns in our own day (see Grove).

This chapter addresses a concern that inevitably arises when one makes the case for literary study's relevance to public policy. As fiction, what kind of knowledge claim can literature make? Even if one asserts that literature has a cognitive component, as many do, it is clear that the insights of

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fiction differ in kind from knowledge provided by quantitative study, from "facts and figures," in Dickens's memorable phrase (*Hard Times*). There is nothing to be gained, in my view, from attempting to minimize the difference between literature and other forms of knowledge. Rather I want to emphasize that difference as part of my argument for why the policy world needs to add literary study to its armamentarium. Literary reading gives access to meanings, meanings that often circulate below the threshold of consciousness, meanings that may be difficult to capture in facts and figures. We are faced with a simple but enduring question, one that frames the differences between science, literature, and history in bold terms. The question is this: How do we weigh the respective claims of meaning vs. knowledge?

It is a new version of a very old debate: Poetry or Science? Fiction or Fact? The question of poetry's place in the hierarchy of knowledge can be traced back to Plato and Aristotle, and it was prominent in Philip Sidney's *Defense of Poesy* (1578). But from the Enlightenment onward and with increasing urgency in the nineteenth century, the debate about the value of poetry was framed in relation to science. Wordsworth maintained that the opposite of poetry was not prose but science, a sentiment Coleridge echoed in almost the same words a decade later. "Art is not science," Hazlitt declared, "because science is mechanical and art is not" (482). Dickens famously parodied his century's obsession with facts rather than imagination in *Hard Times.* But John Stuart Mill came closest to formulating the question I am posing in his two essays comparing Bentham and Coleridge. Bentham, Mill said, challenges us to inquire of any opinion "Is it true?" whereas Coleridge leads us to ask ourselves "What is the meaning of it?"[2]

Poetry and Knowledge

Once poetry was not so clearly divorced from knowledge. Although pleasure has always been central to determining poetry's value, the Roman poet Horace emphasized poetry's dual function, to "please and instruct." For Sidney, poetry still united pleasure with instruction. But, for Wordsworth, the *type* of delight poetry gives readers was one of the things that separated it from the austere pleasure scientists can experience during their long and arduous pursuit of truth. According to Wordsworth, the Poet taps into universal sources of enjoyment, pleasures that are accessible to all, whether old or young, learned or unlettered. The Man of Science, by contrast, "seeks truth as a remote and unknown benefactor" pleasing himself, despite the difficulty of the path, with the conviction that the

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goal is lofty and the sacrifice justified (Wordsworth 738). Whereas for Horace, poetry pleased *and* instructed, poetry now is seen as bringing a richer, deeper pleasure than the sciences, especially when poetry eschews instruction. It already is "the breath and finer spirit of all knowledge" (738) so does not need to stoop to didacticism. It infuses and enlivens all intellectual life, even what science has murdered to dissect. Thus, Wordsworth envisions a day in which the facts of science may themselves become the stuff of poetry. "The remotest discoveries of the Chemist, the Botanist, or Mineralogist, will be as proper objects of the Poet's art as any upon which it can be employed," but only when "these things shall [become] familiar to us . . . as enjoying and suffering beings" (738).

The realignment of poetry and science in the nineteenth century creates a compelling rationale for neo-Victorian fiction to take up the question of their respective merits. Focusing on this question in metahistorical fiction further complicates matters by simultaneously raising the issue of history's status as a discourse. Is history fact or artifice, a construct of the historian that makes it an unacknowledged variety of fiction? During the 1980s, a strain of postmodern theorizing about science and history argued that both discourses exaggerated their status as knowledge by ignoring the fictiveness of all discourse. The claim of either discipline to objectivity, one line of reasoning went, was undermined by the situated character of all knowledge. This postmodern critique, however, is not particularly relevant to neo-Victorian novels about science. Barrett and Byatt are representative of a number of contemporary novelists who are less invested in deconstructing science or history than in identifying the distinctive value and ethical use of each. They skirt the pitfalls of epistemology – as well as the scorched terrain of the science wars – by focusing on the affordances of each mode, not just the limitations of scientific and historical truth claims.

The different stances of postmodern theory and neo-Victorian literature are shaped by their divergent genres and audiences. As a realist form of metahistorical fiction, neo-Victorian novels emphasize sympathetic attention to the human dimension of science and the desire to know what we can about the past. This difference in orientation toward science is what makes neo-Victorian novels particularly useful for the researcher interested in thinking about science *policy* rather than in challenging the foundations of science. The genre explores the personal, social, and political meanings that flow from scientific discoveries, a task of importance to policy makers.

Neo-Victorian fiction probes not only the transgressions but also the plight of nineteenth-century scientists in the tropics. They attend to the sufferings and failures of their characters more often than to their

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triumphs. The dilemma of Victorian scientists in the tropics has been well described by Jonathan Lamb, who noted that European explorers and natural historians in the South Seas, "rather redoubled their ignorance than increased their knowledge" when "confronted with the vastness of the ocean, and the unclassifiable diversity of its people and its plants" (4). But the goal of understanding science and history on their own terms does not blind neo-Victorian novelists to the complicity of their scientific protagonists with what Robert Aquirre has characterized as "informal imperialism." Aquirre argues that practices of mapping, categorizing, displaying, and narrating shaped "an audience receptive to the influx of British power in the region" (xvi), despite the prevailing opposition of British scientists to colonial conquest and slavery. Similarly, the scientists in Barrett and Byatt's stories are progressive men of science who are horrified by the devastation of native populations and natural environments brought on by colonization, yet they are themselves still guilty of all manner of sins: scientific racism, eugenics, cultural appropriation, bio-prospecting, economic exploitation, and more.

In *Dying to Know: Scientific Epistemology and Narrative in Victorian England*, George Levine details the costs of a scientific stance that required the sacrifice of human entanglements to produce knowledge. Nineteenth-century science, Levine shows, increasingly demanded "denial of self" as "the means to a greater good" (114). A dispassionate attitude and disinterested frame of mind were the price Victorian scientists thought they had to pay to obtain objective results. In related terms, Lorraine Daston and Peter Galison explore this mindset as a requirement of nineteenth-century scientists who aspired to achieve objectivity.

Neo-Victorian novels about science dramatize the opposite loss: the sacrifice – of factual accuracy, of scientific knowledge, in some cases, of life itself – demanded in the pursuit of meaning rather than knowledge. Such fiction amounts to a rationale for literature, a contemporary defense of poesy, which counterposes the effort to find meaning in a character's life to scientific lives spent in the pursuit of knowledge. They bridge the gulf Wordsworth postulated between science's remoteness from the wellsprings of shared human suffering and poetry's close contact with those waters. That the scientific lives in question are Victorian – whether actual Victorian scientists like Wallace and Darwin or fictional versions like the characters in these stories – implicates history in the problem, challenging us to ask if history is a form of knowledge or of meaning.

The stories I turn to next capitalize on the prominence of the dichotomy between literature and science in the nineteenth century to write

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metahistorical fiction about the distinctive character of all three modes: literature, science, and history. The fact that the nineteenth century also saw the origin of the two-cultures split makes this period of special concern to the increasing number of novelists who are fascinated by science today.

Andrea Barrett's "Birds with No Feet"

Wallace devoted much of his career to studying birds. Both of Wallace's major voyages – to the Amazon and to Borneo, Sumatra, and the Aru Islands – were dedicated in part to the pursuit of rare species of birds. Wallace traveled hundreds of miles up the Amazon, battling fever, loneliness, and privation in a successful quest to find the white umbrella bird. Later, he devoted months to the search for the fabled bird of paradise, a quest that took him to one island after another in the South Pacific. His persistence was rewarded with triumphant success, as he collected examples of numerous varieties, including one that bears his name.

Andrea Barrett's "Birds with No Feet" concerns an unsuccessful nineteenth-century explorer and would-be naturalist whose expeditions bring him into contact with Wallace, first in the Amazon and then in Borneo. Significantly, his experiences of bird hunting, feverish dreams, the capture of a live bird of paradise, and the loss of all his collections in a fire at sea mirror those of Wallace. Barrett uses her fictional collector, who fails to become the scientist he longs to be, as a way of responding to Wallace's voyages, even as she includes Wallace and his achievements as independent elements in the story.

"Birds with No Feet" is only one of several stories in *Ship Fever* that juxtapose the lives of Victorian naturalists – Darwin, Wallace, and Mendel – with those of scientists today.[3] The volume as a whole employs a dual time scheme – both within some of the individual stories and across the collection as a whole – characteristic of many neo-Victorian fictions. The first story of *Ship Fever,* "The Behavior of the Hawkweeds," encapsulates Barrett's method in miniature. The story moves fluently back and forth in time between a lonely woman in the present married to a genetics professor at a New England college, her immigrant grandfather who once knew Gregor Mendel, and Mendel himself who worked in isolation on a discovery that no one would notice until the next century. What unites the three is a letter that Mendel gave to the woman's grandfather and that she in turn shared with her husband. Mendel's letter is like a genetic trait passed down through time, but the letter itself is less important than the stories the characters tell one another about its transmission. These stories,

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more than the inheritance itself, bind the present to the past in ways that both damage and redeem. Stories prove as tenacious as DNA in connecting us across time.

In "Birds with No Feet," Barrett imagines a young American collector named Alec, the wayward son of an improvident tavern keeper, who aspires to become a naturalist and gain the fame and position that Wallace eventually achieved. After the shipwreck that destroyed all the specimens he had hoped to sell in Philadelphia and the journals that he had hoped to turn into a narrative that would bring him both scientific and popular renown, he finds himself forced to abandon his scientific ambitions for more commercial goals. On his second voyage he becomes so consumed with killing and preparing specimens for the market that he has no time for science. By the end of his expedition to Borneo, he finds himself reduced to a shadow of his former self, wasted physically by repeated bouts of malaria and spiritually by his failure to live up to his dreams. When he returns to America in 1862, he finds his country consumed by civil war, a national trauma that extends and magnifies his sense that his pursuit of knowledge has been in vain. As he enlists for "another murderous journey" (122) with the army of the North, he sees his pretense to science – perhaps science itself – as merely an illusion. How do his dreams of contributing to knowledge matter in the face of an entire civilization tearing itself to pieces?

The story ends with a boy on Aru asking what would become of all the birds Alec has shot and preserved for his collections. Alec remembers a line from one of Wallace's letters: "*Each bird we shot and butterfly we netted was in the service of science*" (122, italics in original), but this disappointed character knows the words do not apply to him. Instead of knowledge, all that has come out of his voyages is memory and a persistent desire for something more, something unattainable. In that, the collector mirrors – and comments on – Barrett's own relation to the past. For her, historical knowledge plays a secondary role to meaning. Memory and desire for the unattainable – these are not what history *or* science would classify as knowledge, but they are the remainder of a life – its meaning, if you will.

What would become of all the birds? What becomes of Alec's life? The Aru boy answers: "We believe that all the animals you kill and keep will come to life again. . . . They will rise . . . when the forest is empty and needs new animals" (121–22). To Alec, this answer seems as probable as Wallace's theory of natural selection. Both are efforts to make sense of change over time, of generation and extinction, of loss. But one is a source of meaning and solace, the other a contribution to knowledge. If "meaning

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can never quite penetrate reality," as Lukács tells us, "without meaning, reality would disintegrate into the nothingness of inessentiality" (88). That is what has happened to Alec, who has returned from the failure of his scientific dreams to a reality engulfed by war. Hence, his attraction to a myth about the resurrection of forest animals. But Alec sees the value of both the Aru myth and Wallace's insight, a dual perspective that produces what Lukács calls "the melancholy of the adult state" (86). The pathos of Barrett's story, the beautiful solace it offers, can help us distinguish Alec's melancholy recognition from the convenient fictions that some people today prefer to scientific facts. It is fear or anger that motivates many in our world to deny reality and embrace myths about vaccines, say, or climate change, or to deny, as Alec never will, the theory of natural selection. The meaning Alec finds in Aru myth is as valuable as the scientific knowledge it will never displace.

Literature, Memory, and Meaning

Andreas Huyssen has observed a penchant in contemporary culture for approaching the past via memory rather than history. Memoirs, journals, memory gardens, memory quilts, testimonials, eyewitness accounts, oral histories, video recordings, autobiographies, and historical fiction – these forms of remembrance take pride of place today, Huyssen argues, replacing in the popular imagination forms of historical investigation that rely on documentary evidence or records that can be verified by others. This "memory fever," as Huyssen calls it, is particularly intense in "border-crossing memory discourses" (12) – for which the Holocaust serves as Huyssen's archetype – memory discourses that are simultaneously generalizable yet particularized with each new atrocity from Rwanda to Bosnia to Xinjang.

Given its popularity, neo-Victorian fiction would seem to be a prime symptom of "memory fever" supplanting history, especially when considering border-crossing stories of European scientists in distant lands. Huyssen foregrounds the intimate connection between art, memory, and meaning in these kinds of texts, and contrasts this affective collage, hyperbolically in my estimation, with the decay of history's prestige in today's media-saturated culture. Yet to view this genre merely as symptomatic of a deplorable, recent trend is to overlook the divergent aims and values of literature and history. Rather than seeing one as a pallid substitute for the other, providing the weak pleasures of nostalgia rather than authentic history, as Fredric Jameson once argued postmodernism did,

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one should look closely and care deeply about the particular cultural work performed by these forms. Literature has been a vehicle of both personal and cultural meaning since writing began to replace oral traditions as a source of knowledge about the past. A historical text can be such a vehicle too, but the burden of history is that it must strive for Truth before it can have meaning for others. Literature must have meaning for others before it can be True.

If one had to identify a period in which the affective collage of literature, memory, and meaning began to intensify, one would have to turn again to the nineteenth century. From Wordsworth's day, and increasingly throughout the century, literature seemed called upon to supply the meaning once provided by religious belief. T. E. Hulme derisively called Romanticism "spilt religion" (118). Raymond Williams and M. H. Abrams both chronicled what the latter called "natural supernaturalism," the investment in literature and the arts that led figures like Mill and Arnold to seek the consolation that they could no longer find in received doctrine through poetry – Wordsworth's verse in particular. In the twentieth century, the emphasis on literature as a source of meaning was one of the factors behind the interpretive turn in literary studies, inaugurated by Eliot, Empson, and Leavis in England and Vanderbilt's New Critics in America.

Of course, there have always been forms of literature that emphasized knowledge as much as meaning – wisdom literature, Menippean satires, Georgics and other didactic poetry, Hazlitt's "Literature of Knowledge," the group of texts Northrop Frye called "anatomies" (*Anatomy* 308–14), encyclopedic fictions like *Finnegan's Wake* or *Gravity's Rainbow*, the novel of ideas, *roman a theses*, or documentary fictions, such as Upton Sinclair's *The Jungle* or James Agee's *Let Us Now Praise Famous Men*. These are eccentric genres, however, oddities or sports that survive today but rarely flourish in furrows cultivated by uncommon energy or genius. They propagate few offspring.

Equally, science can be a source of meaning for both scientist and layperson alike. Einstein maintained that the "strongest and noblest motive for scientific research" was the "cosmic religious feeling" (238). In *The Meaning of Human Existence*, E. O. Wilson contended that science, not philosophy, would explain the meaning of humanity (38). Darwin himself always searched for the larger meaning of his theories, in part to forestall the very different constructions that would be put on his ideas by others: "There is grandeur in this view of life," he wrote at the end of his greatest work (396). But Stephen Jay Gould spoke for the majority when he said

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that science had little to say about "questions of ultimate meaning and moral value" (*Rocks of Ages* 6). The notion that science can provide answers to existential questions has been called the "naturalistic fallacy" (Coyne 111), and belief in a guiding scientific idea has often led to pernicious ideologies, as was the case with eugenics in the early twentieth century or among some advocates of Wilson's sociobiology today. On the other hand, disbelief in science has become a widespread problem in our society – witness creationists who reject evolution and climate change deniers. The mistaken notion that science is something that one should believe in (or disbelieve) represents an inappropriate response to the kind of knowledge it provides. One does not *believe* in scientific knowledge; one tests it, extends it, and employs it to improve the world and make new discoveries.

A. S. Byatt's "Morpho Eugenia"

On one level, A. S. Byatt's novella, "Morpho Eugenia," is a takeoff on Victorian sensation fiction, filled with lurid sexuality, and connected to the extensive arguments about Darwin, Wallace, and evolution only by the dangers of inbreeding that an incestuous brother and sister run. The naturalist, William Adamson, finds himself marooned in England by shipwreck and poverty, dependent on an elderly, religious patron, Sir Harald Alabaster. Troubled at first by this enforced idleness, Adamson soon finds himself seduced by the charms of the family's eldest daughter, Eugenia. The course of this plot is swift and predictable. Although far above him in social standing, Eugenia marries Adamson as cover for her ongoing affair with her older brother and promptly begins to bear children that run true to the Alabaster family morphology. But if this plot is as obvious to the reader as it is opaque to Adamson, a second, more complicated plot emerges from the naturalist's friendship with Matty Crompton, a companion for the children who shares his fascination with birds, butterflies, bees, and ants. During their field trips with the children to nearby woods, Matty reawakens his passion for science and together they write a successful children's book of natural history about an anthill on the estate. Matty turns out to be a secret author herself. Through an engaging faux-Victorian fairy tale, she conveys an allegory to Adamson with the moral: "Things are not what they seem." The irony, of course – or rather, one of several ironies – is that this message is a commentary not only on Adamson's marital charade but on Byatt's metahistorical fiction.

"Morpho Eugenia" turns out to be a compendium of narrative structures for conveying double meanings. On the first page we learn of the

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split nature of experience for our protagonist. After ten years in the tropics, the loss of all his notes and collections at sea, and fifteen days of near starvation in a lifeboat, everything at the Alabaster estate seems unreal. His hostess is urging him to dance, and he admires the "shimmering girls," pale and blond in their "shell-pink and sky-blue" gauze and tulle (3). But he cannot shake the image of "communal dancing" in the Amazon with dark, nearly naked Indian women. Throughout his time on the Alabaster estate, Adamson is haunted by what Byatt repeatedly calls "double consciousness" (28). The world seems filled with "strange analogies" (35) – analogies between English manners and Amazonian customs, and between instinctual ant behavior and human practices. Everywhere he looks on the estate – dances, marriage rites, religious beliefs, male dominance displays, a slave-making ant species – Adamson is tormented by a "double vision, of things seen and done otherwise in another world" (7), whether a distant human society or an equally alien insect world.

Doubleness is not merely a matter of Adamson's experiences in two worlds. It is a structural feature of the story itself. Byatt underlines this point by making copious references to literary forms that highlight double meaning. The novella is chock-a-block with parables, fables, analogies, anagrams, dream interpretations, extended metaphors, didactic children stories, fairy tales, puzzles, and riddles.

Personally, Adamson distrusts analogy. In his arguments about evolution with Sir Alabaster, who reasons in the vein of Paley's *Natural Theology* by basing his proofs of God's hand on analogies, Adamson objects: "You may argue anything at all by analogy, Sir, and so consequently nothing" (104). Adamson speaks of "irrelevant analogies" (74) and reproves his own habit of seeing his life in terms of a "diminishing analogy" with the ant world. "Analogy is a slippery tool," he comments. "Men are not ants" (116). Here we find in succinct form one objection to using analogy to prove a point. By contrast, Devin Griffiths has argued that romantic poets and nineteenth-century scientists alike employed analogy more creatively, turning it into an exploratory tool, an instrument for intellectual inquiry. For some writers, Griffiths maintains, analogy changed from being the kind of formal structure to which Adamson objects, the sort that simply maps information from a source domain to a target domain, while suppressing the semantic dimension of the former; instead, it became a reciprocal structure, where both domains in a comparison offered perspectives on a new relationship. In such cases, analogy would become a stimulus to further experimental investigation,

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turning literature, like science, into a vehicle for investigating reality. While this probing, exploratory use of analogy may inspire scientists as much as poets, analogy produces meaningful ways of looking at the world, not facts. The use of analogy that Adamson reproves is the kind that presents an analogical relation as a form of proof, as self-evident knowledge, not a tool of inquiry.

Adamson's objections to "irrelevant analogies" prepare the way for the sustained case Byatt makes for the value of literary ways of thinking. The story endorses literary modes of saying one thing and meaning something else (reciprocal analogies, parables, riddles, allegories, fairy tales, etc.), one of the basic ways in which fiction makes meaning out of stories. The parade of literature's formal resources for introducing ambiguity and doubt into the act of representation reaches a climax in the metaphor that gives the story its title. Eugenia, like the butterfly that shares her name, transforms from one morphological form to another, the Alabaster *nympha* he thought he was marrying to the *imago* who is her brother's compliant mistress.

Griffiths argues that the probing, comparative form of analogy that emerged as a central feature of the nineteenth-century historical novel became a model for adventurous scientists of the period – Charles Darwin in particular. What Darwin (but not Paley) shared with historical fiction was a "commitment to analogy . . . as a tool that brings the relation between previous ages and present into focus, seeking the origin of contemporary social and natural order within the patterns of past events" (Griffiths 2–3). This same comparative historicism is what Byatt seeks to emphasize by parading such a wealth of analogical literary modes in front of the reader. She is making a claim about the value of literary modes of thinking for uncovering meaningful relationships between past and present. In the process, she dramatizes Adamson's learning from Matty to trust analogy's insights and to discover a more adventurous way of doing science, one more like his hero Darwin and less like that of an old-fashioned natural historian.

In the fairy tale Matty writes to warn Adamson about his deceitful wife, she uses a bit of nonsense language to capture the role that names and tropes play in making meaning out of relations between things. "Names, you know, are a way of weaving the world together, by relating the creatures to other creatures and a kind of *metamorphosis,* you might say, out of a *metaphor*, which is a figure of speech for carrying one idea into another" (150–51, italics in original). For this Son of Adam, who once thought that by naming the insects, natural history could pin down the

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world, the lesson comes painfully late, yet in time to enable him to escape on another voyage of discovery.

Byatt and Barrett both have a gift for ending their stories with resonant images, which condense meaning into emotion. It is a skill of special value to the short story as a genre, for stories rely on compression to make a life come to a head in a revelatory moment. Years ago, in *The Sense of an Ending*, Frank Kermode described the power of this kind of narrative closure in words that moved me as much as any critical writing I have read before or since. Kermode wrote that the end of stories cast the "benefaction of meaning" over all the turmoil and strife that had gone before (178). In our own lives, we are born into the middle of things, and we die before the world's end, but in literature we can experience a completion that is impossible elsewhere – that is fiction in every sense of the word. Kermode's insight enables us to recognize affect as a critical component of literary meaning and experience aesthetic pleasure as understanding, if not knowledge.

The end of "Morpho Eugenia" takes place on the deck of the sailing ship *Calypso*, bound once again for the tropics. Far out to sea, Adamson and Matty are surprised by a Monarch butterfly, which has fluttered exhausted onto the rigging. They are filled with emotion, although uncertain whether this feeling is fear or hope. The butterfly is "so fragile, and so easily crushed, and nowhere in reach of where it was going," Matty murmurs. "And yet it is still alive, and bright, and so surprising, rightly seen" (183). We understand this butterfly as yet another metaphor for the two vulnerable characters, still nowhere in reach of their goal. "As long as you are alive," the captain responds, "everything is surprising, rightly seen" (183). Not a conclusion that contributes to the store of human knowledge. But an end that makes sense of a life.

David Mitchell's *Cloud Atlas*

Unlike Barrett and Byatt's stories, David Mitchell's novel *Cloud Atlas* (2004) is not primarily a neo-Victorian fiction. Its innovative structure ranges across six different time periods, each nested within the others like a set of Russian matryoshka dolls, an image the novel invokes more than once. But the opening and closing chapters are neo-Victorian. They consist of the nineteenth-century journal of Adam Ewing, a shipwrecked traveler searching for passage home from a South Sea island while being slowly poisoned by Dr. Henry Goose who is posing as his friend. The journal breaks off in mid-sentence, and the next chapter picks up the story

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of a different character, a young composer living in 1931. Each subsequent chapter shifts to the story of a new character decades in the future until the novel reaches its pinnacle in a distant, postapocalyptic world, only to reverse course back down time's ladder, completing the stories in reverse order.

The neo-Victorian sections introduce one of the novel's central themes: Will human history be ruled by survival of the fittest? In each of the six linked stories, characters who believe that "humanity may transcend tooth & claw" (508), as Adam does, contend with the will to power of characters such as his supposed friend who believes "the weak are meat the strong do eat" (489). This Darwinian theme is everywhere evident: in the extermination of a peaceful island tribe by conquering Maori, in the extinction of seals by overhunting, in the devastation of native populations by Western diseases, in the looming environmental damage from an unscrupulous nuclear power corporation, in the cloning of human slaves in the near future, and in the radioactive dead lands that cover most of the planet in the far future. "Our will to power, our science, and those v[ery] faculties that elevated us from apes, to savages, to modern man," one character declares, "are the same faculties that'll snuff out *Homo sapiens* – before this century is out!" (444–45).

The opening sentence of *Cloud Atlas* literalizes Dr. Goose's cannibalistic metaphor via a reference to the cannibals in Defoe's *Robinson Crusoe*. Adam stumbles upon a trail of fresh footprints on a forlorn strand, which leads him to the predator who will nearly kill him. Although supposedly a surgeon to the London elite, Dr. Goose is first seen collecting human teeth from the sand, the remains of a "cannibals' banqueting hall," where "the strong engorged themselves on the weak" (3). This is the first of many references to the later nineteenth-century belief in social Darwinism, the supposedly scientific justification for all manner of horrors, from unbridled *laissez-faire* competition to plundering of natural resources to human slavery and genocide. Dr. Goose has taken to heart a particularly uncompromising version of this "scientific" social law. In a conversation late in the novel, Dr. Goose listens to a preacher named Horrox who sermonizes on God's wisdom in establishing Anglo-Saxons as the "highest of all the races" on "Civilization's Ladder" (487). Horrox takes the standard line: "Nature's Law & Progress" will lead to extinction of lesser races; "Unpleasant scenes may ensue, but men of intellectual courage must not flinch" (488). Dr. Goose agrees but goes him one better. It is not God who has made the white races dominant, he responds, and then explains later to Adam:

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> Why tinker with the plain truth that we hurry the darker races to their graves in order to take their land & its riches? Wolves don't sit in their caves, concocting crapulous theories of race to justify devouring a flock of sheep! . . . True "intellectual courage" is to dispense with these fig leaves & admit all peoples are predatory, but White predators, with our deadly duet of disease dust & firearms, are examplars [*sic*] of predacity par excellence, & what of it? (490)

In case we have missed the analogy between cannibalism and social Darwinism, Dr. Goose adds that he sees humans not as "sacred beings" but as "joints of meat," "ready for the skewer & the spit" (503).

Extinction and slavery were incidental themes in Barrett and Byatt, but they are major refrains in *Cloud Atlas.* Mitchell's novel treats the urge for domination as one of humanity's original sins and confronts not only the extinction of individual species but also the possible end of all life on the planet.[4] We have come full circle. Wells's *Time Machine* foresaw the strong Morlocks consuming the weak Eloi in our distant future and understood extinction of life on earth as part of an inevitable, planetary process, eons in the making.[5] Writing in the twenty-first century when global warming poses a present danger and new forms of slavery thrive in global sweatshops and the sex trade, Mitchell sees each age hurrying on to the end through its own heedless will to power.

The unusual temporal structure of the novel allows Mitchell to end his story twice – once at the exact center of the book, when the story begun hundreds of years earlier in Adam's journal reaches the chronological end of humanity in a distant, postapocalyptic future. Then, again, on the last pages of the book, when Adam is delivered from the murderous designs of Dr. Goose by his ship's long-delayed arrival in safe harbor.[6] Each of these endings – the chronological ending at the center of the book and the closing pages of the book's final chapter – takes place in the tropics, in Hawaii to be exact. The shared tropical setting binds Adam's Pacific Journal to the story of Zachry, the protagonist of the central chapter. A to Z, alpha to omega, the beginning and end of the six discrete narratives to the beginning and end of all humanity.[7] Here, as elsewhere, the temporal structure of the novel expresses the conflicting imperatives of deep time and personal history. Each of the six time periods immerses us in the story of an individual. The Adam and Zachry chapters reinforce this personal dimension by employing what Huyssen identifies as "memory discourses" par excellence (12) – a journal and an oral life history.[8] In the latter case, Zachry narrates his life story at the request of two young lovers, interrupting himself to explain, in his distinctive dialect, that "these are the

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mem'ries what are minnowin' out" (243). A garrulous old man at fifty, Zachry is haunted by guilty memories, like Coleridge's Ancient Mariner, and his autobiography is as much expiation as personal history.

Huyssen laments the "memory fever" that has infected our times. An earlier theorist of history, Walter Benjamin, sees memory playing a more valuable role in our grasp of the past. In "Theses on the Philosophy of History," Benjamin writes that the kind of history that matters "seize[s] hold of a memory as it flashes up at a moment of danger" (255). And that is eminently true of Mitchell's novel. All the historical periods respond to a "moment of danger," for the protagonist, for society, and ultimately, for the species. The danger is particularly salient in the Darwinian passages that pepper Mitchell's text, most of all in the passage I quoted earlier on the dangers that lie within the West's "civilizing" mission. "Our will to power, our science . . . are the same faculties that'll snuff out *Homo sapiens* before this century is out!" (444–45). I hear echoes in this dark critique of another of Benjamin's famous theses: "There is no document of civilization which is not at the same time a document of barbarism" (256).

The progress of civilization, inaugurated in the neo-Victorian chapters of the novel, moves inexorably toward barbarism and extinction. Yet there is a countermovement in Mitchell's novel. Each time period also stresses the commonalities, recurrences, and shared traits that bind the characters together and transform them into instances of a cyclical or recurrent pattern. Reincarnation, Nietzsche's Eternal Return, variations on a musical theme, nested matryoshka dolls – countless motifs in the novel evoke time's cycle. Events repeat one another; characters share the same birthmark and remember things that happened centuries in the past or future; genres and media recapitulate the history of forms – journal, epistolary narrative, pulp fiction, film, hologram – then back to the earliest form of all, oral narrative. The paradoxical combination of linear and cyclical perspectives on time reflects both the genre's commitment to the narrative of individual lives and our more contemporary concern with the fate of the planet. In doing so, it captures the way in which our culture's understanding of time has developed since the nineteenth century.

The neo-Victorian embrace of such a paradoxical conception of time was not a recourse available to most Victorian authors. Cyclical time was still too resonant of its sacred roots for post-Darwinian materialists, while a starkly secular view of linear time, with no guiding destiny or redemptive end, was intolerable for most religious readers. Mitchell, by contrast, openly embraces time's duality, an attitude characteristic of genome time. With our limited lifespans, individuals experience deep time primarily

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through art, ritual, and religion. But for Mitchell, these three modes are interrelated – literature and art, he asserts, construct belief. The novel repeatedly dramatizes how fictions give purpose and meaning to his characters' struggles and to civilization's best instincts – or its worst. "Pretendin' can bend bein,'" Zachry declares (283). And Adam in his journal: "If we *believe* humanity is a ladder of tribes, a colosseum of confrontation, exploitation & bestiality . . . [then this] predatory world *shall* consume itself" (508). On the other hand, "If we *believe* that humanity may transcend tooth & claw, if we *believe* divers races & creeds can share this world . . . [then] such a world will come to pass" (508, italics in original). Like Barrett's failed naturalist finding meaning in a belief he knows to be a fiction, Adam finds purpose in believing in a cause, abolitionism, because "belief is both prize & battlefield, within the mind & and in the mind's mirror, the world" (508).

Adam's adventures in the Pacific prompt him to picture deep time as a "stream grinding boulders into pebbles through an unhurried eternity" (507). The earth's unhurried ages have provided Adam with more examples of violence and rapacity than he cares to contemplate, and he has heard too many men justify their hunger for power as part of Nature's plan. But Adam rejects this interpretation of deep time, averring instead that "for the human species, selfishness is extinction" (508).

Conclusion: Meaning or Knowledge?

In an essay on Darwin's *Voyage of the Beagle*, George Levine argues that Darwin increasingly came to prefer factual knowledge to the "entanglements and sublimities to which he was emotionally drawn" (365). Levine's essay, "By Knowledge Possessed," charts Darwin's movement from "an essentially poetic response . . . to a scientific one" (379). As he grew older, Darwin "increasingly reject[s] the unmodified attempt to describe" nature in favor of capturing the "phenomenon in secular and systematic terms – 'general laws' produced from large collections of facts" (379–80). Levine's account of Darwin's journey away from pleasure and meaning to general laws and facts makes the opposite, yet complementary point to my own – that nineteenth-century science had to give up certain kinds of personal fulfillments to achieve knowledge.

It is an old debate: Poetry or Science? Fiction or Fact? to which I would like to add Meaning or Knowledge? Levine's work laid bare the costs of a scientific epistemology that required the sacrifice of human entanglements to produce truth. "The West, in order to know, had to die to desire, had to

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die to its human interests" (*Dying* 268). In Barrett, Byatt, and Mitchell's fictions those are the only things that remain, desire and its human interests. They are the beautiful remnants of lives that persist in memory – and in literature – after the fruitless voyages have come to an end. The scientist who has produced no knowledge produces for us, readers of literature, an alternative that seems to suffice: recognition of what it means for a person to have lived.

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