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*Darwin's Human History**Ian Duncan***II.1 An Exceptional Animal**

“How did humans come to be such an exceptional species?” asks evolutionary anthropologist Robert Boyd:

Five million years ago our ancestors were just another, unremarkable ape. Today, our species dominates the world's biota. We occupy every part of the globe, we vastly outnumber every other terrestrial vertebrate, we process more energy than any other species, and we live in a wider range of social systems than any other creature. (2017: 10)

Boyd addresses the abiding question of the “natural history of man” since its foundation as a scientific genre in the late eighteenth century. Once human nature is embedded in terrestrial history and geography, severed from metaphysical causality, what makes the difference between ourselves and other creatures? His answer refreshes key tenets of Enlightenment anthropology. Humans have colonized the whole planet (Lamarck, 1914: 170); they are generalists, cognitively world-embracing (Herder, 2002: 78–79); their dominance arises from large-scale social cooperation, sustained through sympathetic imitation (Hume, 1985: 202–207) and traditional transmission (Burke, 2003: 29–30), rather than individual enterprise (Boyd, 2017: 42–52).¹ Above all, Boyd's invocation of “zoological criteria” (ecological range and biomass) poses the question in a historical rather than an ontological sense: not, “Are humans really exceptional?” but, “How did they become so?” (11).

The historicization of human difference follows Charles Darwin's extension of his evolutionary thesis to *Homo sapiens* in *The Descent of Man* (1871), which completed (at least notionally) the trajectory of naturalistic embedding, and located the crux of the difference at the developmental threshold of emergence from a prehuman state.² What changed, what did not, what was lost and what gained, when natural history became human history? Boyd proposes a temporal gear-shift, in which the accelerated

time of cultural evolution overtakes the slow time of biological evolution. Working according to the same organic principles, but faster, culture outpaces and in certain instances may preempt biology. Whether or how far such a shift might amount to a qualitative change, whereby human history breaks free (if only partially) from a prior natural history (while yet remaining “natural”), is the question that continues to haunt modern thought. Charged with metahistorical force, conditioning the histories of nations and civilizations, human natural history maintains its hold on the popular imagination as well as on scientific inquiry, as is evident in the succession of blockbuster universal histories in Darwin’s wake, from William Winwood Reade’s *The Martyrdom of Man* (1872) and H. G. Wells’s *The Outline of History* (1919–1920) to global bestsellers of our own time, such as Jared Diamond’s *Guns, Germs and Steel* (1997), Noah Yuval Harari’s *Sapiens* (2011), and Rutger Bregman’s *Humankind* (2019). Strikingly, some of these anthropological histories recast the evolutionary transition between prehuman and human states as a *revolutionary* transition: a “Great Leap Forward” (Diamond, 1997: 39), a “Cognitive Revolution” – “the point when history declared its independence from biology” (Harari, 2015: 21–37). Such formulations defy Darwin’s gradualist principle, *Natura non facit saltum* (“nature does not jump”), more brazenly than Boyd’s insistence on an organic process common to the disparate temporal scales of biological and cultural development (Darwin, 2009 [1859]: 177).³

Given the authority of his evolutionary thesis, it is worth asking what kind of human history – more precisely, what account of the transition from a prehuman to a human condition – Darwin has to offer in *The Descent of Man*. The operation of sexual selection according to aesthetic criteria (rather than rational-choice reckonings of “fitness”), shared by humans with other creatures, constitutes the book’s original hypothesis of a human evolutionary principle. Sexual selection becomes the main driver of (cosmetic) physical diversity after humans have established ecological dominance, transformed their material environment, and in effect domesticated themselves. It affords a synchronic rather than a historical view of the continuity across human and nonhuman animal life, as well as across human racial differences, which is sustained rather than eroded by formal variation.⁴

There is a history of human emergence to be read in *The Descent of Man*, but it is cryptic, legible in gaps and pieces rather than through a continuous sequence. As in *The Origin of Species*, Darwin eschews a narrative organization of his argument, which had made earlier evolutionist theses (by Herder, Lamarck, and others) vulnerable to dismissal as works

of conjectural history – more fiction than philosophy or science. The pressure points of Darwin's human history are the cognitive and ethical faculties, or rather the relation between them. Here, upon reason and morality, claims for human uniqueness keep being urged, in persistent attempts to reinstall an ontological difference between ourselves and other creatures. Here, too, Darwin stakes his account of a moral or cultural achievement of full humanity in the form of a universal extension of sympathy to all sentient beings. The achievement is at odds with the biopolitical imperative of human ascendancy according to the logic of natural selection, manifest in the worldwide march of European empire as it laid waste to local populations and ecologies. With their argument that the revolutionary rise of *Homo sapiens* entailed the mass extermination of other species, including collateral human species, Diamond and Harari revert to the faultline in Darwin's account. Harari identifies *fiction* – the imaginary construction of nonexistent states – as the secret weapon in our species' cognitive revolution. In so doing he echoes, if faintly, Darwin's conjectural history of the evolution of the moral sense through the work of the imagination: more richly nourished, in *The Descent of Man*, by the resources of the nineteenth-century novel.

11.2 A Moral Being

One of the main tasks Darwin sets himself in *The Descent of Man* is to dismantle the traditional barriers that separate humans from other animals – especially the cognitive barriers. “There is no fundamental difference between man and the higher mammals in their mental faculties,” he declares; “the difference in mind between man and the higher animals, great as it is, certainly is one of degree and not of kind” (Darwin, 2004 [1871]: 86, 151).⁵ The question persists as to whether, and at what point, a difference in degree might become great enough to constitute, functionally if not categorically, a difference in kind. Darwin's argument comes most strenuously to bear on reason and morality, the favored properties for dividing “man” from “the brutes.”⁶ Darwin efficiently demonstrates the evidence of a rational faculty in other animals, but when it comes to the moral sense, his argument grows more tortuous, until here we find the difference in degree widening into an apparent difference in kind.

“I fully subscribe to the judgment of those writers who maintain that of all the differences between man and the lower animals, the moral sense or conscience is by far the most important” (120), Darwin asserts, and later, more forcefully, “man ... alone can with certainty be ranked as a moral

being” (135). It seems there is a threshold that must be crossed for humanity to come fully into its own. Darwin lays out a conjectural sequence of evolutionary steps through which the human forms of morality arose from prehuman “social instincts,” which bond together all creatures that live together in swarms, shoals, or packs:

Firstly, the social instincts lead an animal to take pleasure in the society of its fellows, to feel a certain amount of sympathy with them, and to perform various services for them. ... *Secondly*, as soon as the mental faculties had become highly developed, images of all past actions and motives would be incessantly passing through the brain of each individual: and that feeling of dissatisfaction, or even misery, which invariably results, as we shall hereafter see, from any unsatisfied instinct, would arise, as often as it was perceived that the enduring and always present social instinct had yielded to some other instinct, at the time stronger, but neither enduring in its nature, nor leaving behind it a very vivid impression. It is clear that many instinctive desires, such as that of hunger, are in their nature of short duration; and after being satisfied, are not readily or vividly recalled. (120–121)

The threshold stage is the second, in which a cognitive faculty – the ability to reflect upon past actions and motives – converts an instinctive sympathy into moral deliberation, which is (thirdly) codified in language and (fourthly) reinforced by heritable habit. At that second stage, instinct bifurcates along concurrent tracks, each of which affords a different subjective relation to time. Appetitive instincts, such as hunger, are bound to the body, and to the fleeting present moment, whereas the social instinct becomes morally efficacious through the mental capacity to inhabit past states and compare them with the present, an operation that dilates the present into an “enduring” state from which we can regulate the future. Darwin’s language characterizes this as an imaginative operation (“images of all past actions and motives ... incessantly passing through the brain”) before it becomes a rational one.

Humans alone, it seems, have evolved that imaginative ability to occupy different temporal states and combine past and present to form a durational continuum, which refines the social instinct into the moral sense or conscience:

A moral being is one who is capable of comparing his past and future actions or motives, and of approving or disapproving of them. ... [In] the case of man, who alone can with certainty be ranked as a moral being, actions of a certain class are called moral, whether performed deliberately, after a struggle with opposing motives, or impulsively through instinct, or from the effects of slowly-gained habit. (135)

Moral actions performed impulsively through instinct are common to the lower animals as well as to humans. What distinguishes human conscience is the deliberation of the moral act through "a struggle with opposing motives." Internal conflict is the stigma of human nature. Its goal is a victory over bodily drives, bound to the sensuous, perishable present, achieved through a power of reflection rooted in the cognitive ability to access a transtemporal state by shuttling between present and past, and adjudicating their competing demands. With this constitution of the moral sense through an agonistic division between temporal states, in order to subsume them, Darwin reinstalls as a psychological condition the ancient figure of a dual human nature.

Darwin's conception, trailing a long literary, theological and moral-philosophical genealogy, has complex, nuanced play in nineteenth-century fiction.⁷ George Eliot's *The Mill on the Floss* (the novel she was midway through writing when she read *On the Origin of Species*) may as well have provided Darwin with his model for the generation of the moral sense through a conflict between natural instincts keyed to different temporal states. Eliot's heroine, Maggie Tulliver, defends her sense of duty, imaginatively binding past, present, and future in an ethical continuum, against her lovers' arguments that it is "unnatural." "The feeling which draws us towards each other is too strong to be overcome," one suitor insists: "that natural law surmounts every other" (Eliot, 1981 [1860]: 475). "Love is natural," Maggie admits, "but surely pity and faithfulness and memory are natural too. And they would live in me still, and punish me if I did not obey them. I should be haunted by the suffering I had caused" (450). And later: "If the past is not to bind us, where can duty lie? We should have no law but the inclination of the moment" (475). Her responses articulate "that feeling of dissatisfaction, or even misery," in Darwin's formulation, that must follow the sacrifice of "the enduring and always present social instinct" to a momentary desire.

The cognitive capacity to inhabit different temporal states is key to an earlier classic of English realism, Jane Austen's *Emma*. (Darwin was an early, avid Janeite, as his letters to his sisters from H.M.S. *Beagle* bear witness [Darwin, 2008b: 54, 205].) Austen's heroines are famous for being able to reread and reassess their prior history, and through that reflection achieve a moral reformation that justifies their status as novelistic protagonists. Emma Woodhouse considers her relationship with Frank Churchill:

Emma continued to entertain no doubt of her being in love. Her ideas only varied as to the how much. At first, she thought it was a good deal; and

afterwards, but little. ... She was very often thinking of [Frank], and quite impatient for a letter, that she might know how he was, how were his spirits, how was his aunt, and what was the chance of his coming to Randalls again this spring. But, on the other hand, she could not admit herself to be unhappy, nor, after the first morning, to be less disposed for employment than usual; she was still busy and cheerful; and, pleasing as he was, she could yet imagine him to have faults; and farther, though thinking of him so much, and, as she sat drawing or working, forming a thousand amusing schemes for the progress and close of their attachment, fancying interesting dialogues, and inventing elegant letters; the conclusion of every imaginary declaration on his side was that she refused him. (Austen, 2003 [1816]: 206)

As well as contemplating past and present, Emma entertains possible, hypothetical, and subjunctive states, in order to arrive at a moral deliberation and become (in effect) the author of her own story. Emma, in other words, is thinking like a novelist – like the novelist in whose novel she plays the leading role. In this case, her novelistic imagining is more authentically deliberative than her misguided attempts to plot the lives of her neighbors.

Emma's imaginative capacity, as it brings her close to the plane of narration, sets her apart from the minor or "flat" characters in Austen's novel. The hierarchical distinction in the character system (theorized by Alex Woloch as an economic division of labor [2003: 143–147]) corresponds to zoological and anthropological hierarchies of the human and less-than-human – beings who are incapable of reflection and hence incapable of joining the cognitive plane of the narration. In contrast to those privileged persons endowed with depth-simulating technical devices, such as free indirect discourse, the flat characters (Mr. Woodhouse, Miss Bates, Mrs. Elton, and the rest), however differently valued, are condemned never to develop – never to change. They are, so to speak, savages in Highbury.

11.3 The Great Leap Forward

To think like a novelist entails a capacity not only to reflect upon past states and compare them with the present, but also – amplifying Darwin's account of the moral imagination – to compare past and present with other possible, potential, and counterfactual states, in order to model alternative, unrealized pasts and presents as well as future outcomes. In his "brief history of humankind," Yuval Harari makes fiction-making the key technology of the "Cognitive Revolution" that produced *Homo sapiens* 70,000 years ago. Humans became human because they (we) alone could "imagine things that do not really exist" (Harari, 2015: 23).⁸ The capacity

to make up a fiction and, crucially, to persuade others to go along with it generates collective life on a large scale, beyond the face-to-face community of the band or tribe – an order of magnitude necessary to launch a civilization. A society of strangers needs a myth, an ideology, for it to cohere and act together. Harari's strictly instrumental view of fiction ("an imagined reality ... that everyone believes in" [2015: 32]) corresponds with what Wolfgang Iser (after Frank Kermode) calls "concord-fictions": inventions that command collective consent, endowing "reality with meaning that ... makes reality into what we think it is." This is in contrast to novels and poems, which exhibit their fictive status, doubling real and imagined worlds rather than subsuming one to the other, as a condition of their legibility (Iser, 1993: 89).

Harari argues that the cognitive revolution impelled a double wave of exterminations: of Pleistocene megafauna, following the human invasions of the Americas and Australasia, and also, more crucially, of the five other known hominin species that shared the planet with us in our early history (Harari, 2015: 13–18, 63–74). *Homo sapiens*' sudden "[jump] to the top of the food chain" produced an unamiably moral and political character. Unlike "majestic" top predators such as lions, who, coevolving with their prey species, inhabit a long (royal or aristocratic) genealogy of evolutionary slow time, humans are shifty arrivistes: "Having so recently been one of the underdogs of the savannah, we are full of fears and anxieties over our position, which makes us doubly cruel and dangerous" – "like a banana republic dictator" (Harari, 2015: 11–12). Harari follows Jared Diamond's correlation of the "Great Leap Forward" with human territorial expansion beyond Eurasia and the consequent "extinction spasm" of large animals in the New World (Diamond, 1997: 43). Diamond mentions only in passing the displacement of Neanderthals by *Homo sapiens* (1997: 40), which Harari amplifies into a full-scale genocide of our cousin species, boosted by the fiction-making superpower that gave us our overwhelming capacity for collective action. Extermination, in short, is the objective proof of human global ascendancy: our signature, or rather our bloody thumbprint, in the fossil record.

Or perhaps not, since the signature consists of an absence of evidence, a disappearance, for which paleoanthropologists have proposed other causes. Rutger Bregman challenges the hominin extermination thesis (Harari's "Replacement Theory") on the grounds that it lacks archaeological proof, and refutes a "Hobbesian" vision of human ascendancy in favor of what he calls his own "hopeful history." Humans prevailed because of our superior capacity to socialize, which evolved not through the weaponizing of

fiction but through selection according to “friendliness,” and a progressive acquisition of cute, childlike features – a Disneyfication of the human physiognomy (Bregman, 2020: 61–63). Bregman’s nickname for our species, “*Homo puppy*” (2020: 65), makes for a cuddly riposte to Harari’s cold-blooded killer ape – much as Desmond Morris’s sexy “naked ape” was a hippie-era riposte to the Cold War–era angry ape of Robert Ardrey, in another widely read conjectural anthropology series. Natural man arrives, in Ardrey’s account, as always already a settler-colonist, aggressively seizing and defending property, whereas in Morris’s he comes into his own (both assume the masculine gender) with the liberation of sensuous skin from bestial pelt.⁹

The great leap forward thesis, with the extermination of other human relatives as its fatal correlative, was given full, popular articulation by H. G. Wells:

The appearance of these truly human postglacial Palæolithic peoples [Cro-Magnons] was certainly an enormous leap forward in the history of mankind. ... They dispossessed *Homo Neanderthalensis* from his caverns and his stone quarries. And they agreed with modern ethnologists, it would seem, in regarding him as a different species. Unlike most savage conquerors, who take the women of the defeated side for their own and interbreed with them, it would seem that the true men would have nothing to do with the Neanderthal race, women or men. (1919–1920, 1: 54–55)¹⁰

Now, thanks to DNA analysis and paleoarchaeology, we know this was not the case. *Homo sapiens* interbred and enjoyed cultural exchanges with Denisovans as well as Neanderthals some 50,000 years ago, in a presumably amicable muddling of taxonomic borders (see Higham, 2021). Darwinian natural history softened the hard distinction between race and species, categories that, having “coevolved” (as Zakiyyah Iman Jackson argues), are “*mutually reinforcing*” – sustaining as well as blurring one other (Jackson, 2020: 12, italics original). If species difference relaxes into racial difference in current scenarios of prehistoric life, earlier human histories imagined the reverse: an antagonistic stiffening. Insisting (like Harari) on genocide as the signature of the “enormous leap forward,” Wells finds it encoded psychologically, affectively, in an instinctively rooted aesthetic of racial hatred:

We know nothing of the appearance of the Neanderthal man, but this absence of intermixture seems to suggest an extreme hairiness, an ugliness, or a repulsive strangeness in his appearance over and above his low forehead, his beetle brows, his ape neck, and his inferior stature. Or he – and she – may have been too fierce to tame. (1919–1920, 1: 55)

Species difference is guaranteed by an insurmountable aversion. After the Neanderthal extinction, Wells writes, "there is no great break, no further sweeping away of one kind of man and replacement by another kind between the appearance of the Neolithic way of living and our own time." Invasions, conquests, and mass-migrations follow, but the human species inhabits a continuous history: "There is no real break in culture from their time onward until we reach the age of coal, steam, and power-driven machinery that began in the eighteenth century" (1919–1920, 1: 62).

11.4 An Empire of Sympathy

Darwin has little to say about early human species. Only one, *Homo neanderthalensis*, had received a taxonomic description by the time *The Descent of Man* was published. Darwin's sole reference to "some skulls of very high antiquity, such as the famous one of Neanderthal" (75), follows T. H. Huxley's supposition that the remains were those of "a Man whose skull may be said to revert somewhat towards the pithecoïd type," rather than "a human being intermediate between Men and Apes" (Huxley, 1863: 157; see also Tattersall, 2009: 28–34). Instead, Darwin looks forward in human history:

At some future period, not very distant as measured by centuries, the civilised races of man will almost certainly exterminate, and replace, the savage races throughout the world. At the same time the anthropomorphous apes, as Professor Schaaffhausen has remarked, will no doubt be exterminated. The break between man and his nearest allies will then be wider, for it will intervene between man in a more civilised state, as we may hope, even than the Caucasian, and some ape as low as a baboon, instead of as now between the negro or Australian and the gorilla. (183–184)

Darwin's prognosis, the more chilling for its placid delivery, eradicates the distinction between human races and anthropoid species, along with the beings in question. Paving the way to "a more civilised state, as we may hope," these extinctions are its structural condition.

The condition seems starkly at odds with Darwin's vision of a more civilized state. If sympathy for fellow members of the pack or band constitutes the social instinct in prehuman animals, its human development takes place by a deliberative expansion beyond the local group:

As man advances in civilisation, and small tribes are united into larger communities, the simplest reason would tell each individual that he ought to extend his social instincts and sympathies to all the members of the same nation. ... This point being once reached, there is only an artificial barrier to prevent his sympathies extending to the men of all nations and races. ...

Sympathy beyond the confines of man, that is, humanity to the lower animals, seems to be one of the latest moral acquisitions. . . . This virtue, one of the noblest with which man is endowed, seems to arise incidentally from our sympathies becoming more tender and more widely diffused, until they are extended to all sentient beings. (146–147)

“Humanity,” the plenitude of our species being, refers not to a biological condition but to a moral one, achieved by the imaginative capacity to cross species boundaries and extend our sympathy to “all sentient beings.” Darwin reiterates this conjectural moral evolution:

As man gradually advanced in intellectual power . . . his sympathies became more tender and widely diffused, extending to men of all races, to the imbecile, maimed, and other useless members of society, and finally to the lower animals, – so would the standard of his morality rise higher and higher. (149)

The prescription carries rhetorical force. If sympathy with “the lower animals” is a token of moral advancement, then we should be able to accept Darwin’s argument that we are also kin to them. He rehearses this logic in the book’s conclusion:

For my own part I would as soon be descended from that heroic little monkey, who braved his dreaded enemy in order to save the life of his keeper, or from that old baboon, who descending from the mountains, carried away in triumph his young comrade from a crowd of astonished dogs – as from a savage who delights to torture his enemies, offers up bloody sacrifices, practices infanticide without remorse, treats his wives like slaves, knows no decency, and is haunted by the grossest superstitions. (689)

Darwin weighs his admiration (rhetorically binding us to share it) of the heroism of the monkey and baboon against the memory of his shocked encounter, forty years earlier, with the inhabitants of Tierra del Fuego (see, for example, Schmitt, 2009: 48–50; Richards, 2017: 424–426, 454–456).

How may we reconcile Darwin’s vision of this utopian summit of morality – the deliberative expansion of sympathy to include “men of all races” and, beyond that, “all sentient beings” – with the forecast of future exterminations? Just before the forecast, Darwin writes:

The great break in the organic chain between man and his nearest allies, which cannot be bridged over by any extinct or living species, has often been advanced as a grave objection to the belief that man is descended from some lower form; but this objection will not appear of much weight to those who, from general reasons, believe in the general principle of evolution. Breaks often occur in all parts of the series, some being wide, sharp and defined, others less so in various degrees . . . these breaks depend merely on the number of related forms which have become extinct. (183)

Any distinction between species is a historical artifact, a phenomenological illusion, constituted by the extinction gap that divides us from our nearest kin. Darwin has explained the logic in *On the Origin of Species*:

There will be a constant tendency in the improved descendants of any one species to supplant and exterminate in each stage of descent their predecessors and their original progenitor. For it should be remembered that the competition will generally be most severe between those forms which are most nearly related to each other in habits, constitution, and structure. Hence all the intermediate forms between the earlier and later states, that is between the less and more improved states of the same species, as well as the original parent-species itself, will generally tend to become extinct. So it probably will be with many whole collateral lines of descent, which will be conquered by later and improved lines. (2009 [1859]: 117)

Darwin is writing, of course, at the height of worldwide British colonial expansion. It may be the case that, with the establishment of civil society, “only an artificial barrier” prevents our sympathies from extending to men of all races; but, Darwin adds, “if such men are separated from [us] by great differences in appearance or habits, experience unfortunately shews us how long it is, before we look at them as our fellow-creatures” (146). It seems the pace of imperial progress, and genocidal struggle over territory and resources, will outrun the time needed to naturalize a sympathetic recognition of strange others – for instance, through our learning to relish (rather than be repulsed by) Darwin’s catalogs of aesthetic variation among different races (see Duncan, 2020: 61–64). In a startling upset of the ratio of cultural evolution to biological evolution, instinctive hatred rides the revolutionary tempo of human history’s “great leap forward,” while the development of the moral sense crawls along in the slow time of a gradualist natural history. “Nevertheless the difference in mind between man and the higher animals, great as it is, certainly is one of degree and not of kind” (151): what appears to be a difference in kind is the product of an ongoing history of violence. This logic also governs the conflation of racial difference with difference between species – the product of that history of violence, retrojected as a moral cause. The extermination of hideous close relatives is the condition for that final dilation of fellow-feeling across the horizon of being which signifies our achievement of full, authentic “humanity”: completing by literalizing the symbolic operation of “overrepresentation,” in Sylvia Wynter’s argument, that makes a particular “ethnoclass” – “the Caucasian” or his hyper-civilized descendant – identical with the human species (Wynter, 2003: 260, 314–326). Our visceral aversion to those close relatives encodes our recognition of them as ecological competitors, the

more intransigently different from us for being almost but not quite the same as us – apparitions of the uncanny valley. Soliciting our appreciation of the relativity of aesthetic judgment across cultures and races, even as we may still find local differences grotesque or appalling, *The Descent of Man* inculcates in its readers the divided consciousness, split between temporally conditioned affects, that brands human nature – and may yet forestall our ascension to full humanity.

11.5 The Exterminating Angel

The savage races, doomed to disappear into the extinction gap, play an anomalous role in Darwin's human history.¹¹ Their fate is prescribed in the place Darwin allots them in the evolutionary transition from prehuman to fully human being. Standing on the near edge of that transition, the "lowest savages" instantiate an unsettling moral and cognitive blankness – a breach, or syncope, rather than a smooth progressive link, in the developmental process:

If we look back to an extremely remote epoch, before man had arrived at the dignity of manhood, he would have been guided more by instinct and less by reason than are the lowest savages at the present time. Our early semihuman progenitors would not have practised infanticide or polyandry; for the instincts of the lower animals are never so perverted as to lead them regularly to destroy their own offspring, or to be quite devoid of jealousy. (66)

The advance from semihuman ancestor to the dignity of manhood requires a weakening – a failure – of instinct, in order for reason to be able to override it: a gear-shift that takes the form of a horrible moral collapse. This is the dialectical negative of that imaginatively enriched enduring present through which reason can generate moral deliberation. And the creatures that exemplify this negative state – devoid of strong regulative instinct and reason alike – are the "lowest savages at the present time," an anachronistic, embarrassing, repellent remainder, lingering beyond the timeline of evolutionary succession, at least until their anticipated extinction.

In a footnote to the second edition of *The Descent of Man*, Darwin cites a comment by one of the book's reviewers:

Mr. Darwin finds himself compelled to reintroduce a new doctrine of the fall of man. He shews that the instincts of the higher animals are far nobler than the habits of savage races of men, and he finds himself, therefore, compelled to re-introduce, – in a form of the substantial orthodoxy of which he appears to be quite unconscious, – and to introduce as a scientific hypothesis the doctrine that man's gain of knowledge was the cause of a temporary

but long-enduring moral deterioration as indicated by the many foul customs, especially as to marriage, of savage tribes. (66)

The theological theme was already made explicit, one year after the publication of Darwin's first edition, by Reade in *The Martyrdom of Man*. In Reade's polemically secular transposition of Christian providential history, humanity is crucified upon the dialectic between sympathy and extermination:

At first the sympathy by which the herd is united is founded only on the pleasures of the breeding season and the duties of the nest But this sympathy is extended and intensified by the struggle for existence; herd contends against herd, community against community; that herd which best combines will undoubtedly survive; and that herd in which sympathy is most developed will most efficiently combine. Here, then, one herd destroys another, not only by means of teeth and claws, but also by means of sympathy and love. The affections, therefore, are weapons, and are developed according to the Darwinian Law. Love is as cruel as the shark's jaw, as terrible as the serpent's fang (1872: 445).

Reade's analysis generates a dismal forecast of perpetual war as the engine of human progress:

Thus war will, for long years yet to come, be required to prepare the way for freedom and progress in the East; and in Europe itself, it is not probable that war will ever absolutely cease until science discovers some destroying force, so simple in its administration, so horrible in its effects, that all art, all gallantry, will be at an end, and battles will be massacres which the feelings of mankind will be unable to endure. (1872: 505)

As well as sketching a blueprint of contemporary British history – ostensibly at peace within Europe, while exporting war and famine across the earth – Reade's prognosis is eerily prophetic of twentieth-century specters of global, civilization-scale destruction.

H. G. Wells identified the moral and political impetus for his *Outline of History* in the carnage of the First World War:

War becomes a universal disaster, blind and monstrously destructive; it bombs the baby in its cradle and sinks the food-ships that cater for the non-combatant and the neutral. There can be no peace now, we realize, but a common peace in all the world; no prosperity but a general prosperity. But *there can be no common peace and prosperity without common historical ideas*. Without such ideas to hold them together in harmonious co-operation, with nothing but narrow, selfish, and conflicting nationalist traditions, races and peoples are bound to drift towards conflict and destruction. ... A sense of history as the common adventure of all mankind is as necessary for peace within as it is for peace between the nations. (1919–1920, 1: 2)

A common human history will provide the script (Wells hopes) for the universal sympathy Darwin had imagined future humanity marching toward, across the killing fields of empire. Later, revelations of the Nazi death camps and Cold War scenarios of nuclear annihilation would give a fresh impulse to the writing of human natural history, and to ancillary new disciplines such as ethology, sociobiology, and evolutionary psychology. Now, in the shadow of biosphere-scale disaster – mass extinctions, and civilizational and ecological collapse – the genre flourishes again.

Notes

- 1 On Enlightenment human exceptionalism see Duncan, 2019: 9, 31–53, 202n27.
- 2 On *The Descent* as conjectural history see Palmeri, 2016: 165–178.
- 3 Boyd reaffirms the analogical method of comparative historicism that Darwin himself derived from novelistic refinements of Enlightenment conjectural history. See Griffiths, 2016: 216–237.
- 4 See Richards, 2017; Prum, 2017; Duncan, 2020: 51–73.
- 5 Further references given by page.
- 6 On affirmations of this division by Darwin’s contemporaries (Charles Lyell, T. H. Huxley, and Alfred Russel Wallace), see Richards, 1987: 161–164.
- 7 For an analysis of critical treatments of Darwin and nineteenth-century fiction, see Griffiths, 2016: 230–237.
- 8 The cause is that magic bullet, “a change in DNA.”
- 9 Robert Ardrey’s *The Territorial Imperative: A Personal Inquiry into the Animal Origins of Property and Nations* (1966), the second of four books on “the animal origins and nature of man,” was published in the same year as the English translation of Konrad Lorenz’s ethological treatise *On Aggression* (1966). Desmond Morris’s *The Naked Ape: A Zoologist’s Study of the Human Animal* appeared the following year.
- 10 Arthur Conan Doyle’s prehistoric romance *The Lost World* (1912) features a climactic genocide of “ape-men,” identified as prehuman ancestors rather than a collateral human species. Wells (1921) resumes the theme in his tale “The Grisly Folk.”
- 11 Patrick Brantlinger argues that Darwin and fellow evolutionists (Huxley and Herbert Spencer) reinforced a normative “extinction discourse” in nineteenth-century natural history. Brantlinger, 2003: 21–29, 164–182.