*Love's Knowledge: Essays on Philosophy and Literature* (New York: Oxford University Press, 1990).
2. Rachel Hollander, *Narrative Hospitality in Late Victorian Fiction: Novel Ethics* (London: Routledge, 2013), 5.
3. Talia Schaffer, *Romance's Rival: Familiar Marriage in Victorian Fiction* (New York: Oxford University Press, 2016), 161.
4. Rachel Ablow, *Marriage of Minds: Reading Sympathy in the Victorian Marriage Plot* (Stanford: Stanford University Press, 2007), 2.
5. Hollander, *Narrative Hospitality*, 1.
6. Hollander, *Narrative Hospitality*, 7.
7. Rebecca N. Mitchell, *Victorian Lessons in Empathy and Difference* (Columbus: Ohio State University Press, 2011), 2.
8. Mitchell, *Victorian Lessons*, 3
9. Duc Dau, *Touching God: Hopkins and Love* (London: Anthem Press, 2012).
10. Gerard Manley Hopkins, *The Sermons and Devotional Writings of Gerard Manley Hopkins*, ed. Christopher Devlin (London: Oxford University Press, 1959), 192.
11. Luce Irigaray, *To Be Two*, trans. Monique M. Rhodes and Marco F. Cocito-Monoc (London: Athlone Press, 2000), 11.

# Evolution

KATHLEEN FREDERICKSON

CHARLES Darwin famously does not use the word "evolution" in the first edition of *On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life* (1859). Only with the sixth edition of 1872 does *Origin* mention the word. Reflecting on evolution's altered status as a legitimate scientific principle, Darwin writes that "things are wholly changed, and almost every naturalist admits the great principle of evolution."[1] As a younger man, he had seen both naturalist and non-naturalist friends be skeptical, dismissive, or wary of earlier evolutionary hypotheses; by 1872, among naturalists at least, natural selection might be contentious, but evolution itself was not.

The use of the word "evolution" as a term for what was also known as the transmutation of species was of comparatively recent vintage. First appearing in French in 1831, the usage migrated into English the following year in Charles Lyell's influential *Principles of Geology*. Lyell uses the word "evolution" to describe the ideas of the French naturalist Jean-Baptiste Lamarck, who was, by then, well known as a proponent of the view that species transmute as a result of adaptation and the inheritance of acquired characteristics;[2] for Lyell, Lamarckian "evolution" evoked a procedural uniformity and temporal gradualism that he prized in his own analysis of geological processes. Lamarck, though, was not the sole progenitor of such views. Notable among Lamarck's predecessors in the transmutation hypothesis was Darwin's grandfather Erasmus Darwin, a figure who was simultaneously, as Devin Griffiths insists, a "crank" and "the most important British advocate of evolution" in the pre-*Origin* years.[3] Though there is no evidence that Lamarck encountered it, Erasmus Darwin's 1794 *Zoonomia* anticipated many of Lamarck's claims, especially with respect to how the use and disuse of organs might factor in species change.

Erasmus Darwin, Lamarck, and Lyell all provided the backdrop for Darwin's private musings on speciation in the so-called transmutation notebooks of the late 1830s. When he began writing these notebooks in 1837, Darwin had read *Zoonomia* at home as a teenager, Lamarck's *Systême des Animaux sans Vertèbres* as a hapless medical student in Edinburgh, and Lyell's *Principles* (as well as Lamarck's *Philosophie Zoölogique)* aboard the *HMS Beagle* on its now famous 1831–36 voyage. Darwin would later also grapple with the contentious reception of Robert Chambers's wildly popular 1844 *Vestiges of the Natural History of Creation*. Darwin found *Vestiges* to be facile and unscientific, but the many and sometimes hostile reviews of it also inflected his thinking about whether to announce his views on the species question. Only the fear of being scooped on the theory of natural selection spurred Darwin to overcome his trepidation. Darwin completed *Origin* hastily after Alfred Russel Wallace sent Darwin his paper "On the Tendency of Varieties to depart indefinitely from the Original Type" in 1858. In this paper, Wallace articulates his own (independent) conclusion that species evolve through a tendency to variation "by minute steps, in various directions," with varieties that exhibit "slightly increased powers of preserving existence" persisting in the face of a Malthusian struggle for life.[4]

Many contemporary readers are used to thinking about Darwinian natural selection as coterminous with evolution, even though, as the historian of science Peter Bowler points out, "much evolutionary

thought has been non-Darwinian in character."[5] Some of evolution's best-known popularizers were as indebted to Lamarck as to Darwin. Herbert Spencer—the coiner of the influential phrase "the survival of the fittest"[6]—is representative of many nineteenth-century appropriations of evolution: though Spencer was happy to adopt natural selection into his notorious advocacy of a brutal *laissez-faire* economic philosophy, he retains key Lamarckian principles around adaptation and inheritance.[7] Similarly, with very different political commitments, the anarchist and Russian émigré Peter (Pyotr) Kropotkin likewise defends elements of Lamarckian theory, though he draws most heavily on Darwin in his description of evolutionary cooperation and "mutual aid."

This is not, though, to suggest that Darwinian natural and sexual selection does not shape the sociobiological imaginary of the nineteenth century. This influence becomes especially pronounced after the 1871 publication of *The Descent of Man and Selection in Relation to Sex*. Gillian Beer's now classic account of the uses of evolution as a narrative paradigm stresses that Darwin's later writing on sexual selection turned to "the individual or communal will" as a "shaping influence."[8] This emphasis on sexual selection as a basis for social policy seemed to license the eugenic theories put forward by his cousin Francis Galton—theories that Darwin himself found compelling.[9] From the late nineteenth century onwards, Darwin's work becomes frequently invoked in a white supremacism under which, as Sylvia Wynter writes, "all the people of Black Africa" appear as "an undeserving race because dysselected-by-Evolution within the logic of the Darwinian paradigm."[10]

But though scholars debate how and when Darwin's thought becomes drawn into eugenic thinking and scientific racism, the association between them is neither wholly determined, nor entirely incidental.[11] Both Nihad Farooq and Cannon Schmitt write about Darwin's time aboard the *Beagle* with respect to, in Farooq's words, his "alternatingly relativistic and imperial manner of looking at the natural world."[12] Without discounting, for instance, Darwin's blithe comments about genocide in the *Descent of Man*, or the appropriation of the theory of natural selection for eugenic racism, recent scholarship also seeks to emphasize the uses that anticapitalist, feminist, and anticolonial thinkers have been able to draw from evolutionary thought. Marwa Elshakry argues that, after a first wave of more individualist glosses, Arab intellectuals developed theories of evolutionary socialism at the turn of the twentieth century that included a "growing international critique of Western capitalist and imperial expansion outside of Europe."[13] For a number of

nineteenth- and early-twentieth century readers, that is, this ability to deploy evolution as an argument against European rule could take a number of forms, some of which also entailed emphasizing, like Kropotkin did, evolutionary mutualism as a model for anticapitalist anarchism or socialism.

## Notes

1. Charles Darwin, *On the Origin of Species by Means of Natural Selection, Or the Preservation of Favoured Races in the Struggle for Life*, 6th ed. (London: John Murray, 1872), 424.
2. On the history of the use of the word "evolution," see especially Gillian Beer, *Darwin's Plots: Evolutionary Narrative in Darwin, George Eliot and Nineteenth-Century Fiction* (Cambridge: Cambridge University Press, 2000), 11; Robert J. Richards, "Evolution," in *Keywords in Evolutionary Biology*, ed. Evelyn Fox Keller and Elisabeth A. Lloyd (Cambridge: Cambridge University Press, 1992), 100.
3. Devin Griffiths, *The Age of Analogy: Science and Literature between the Darwins* (Baltimore: Johns Hopkins University Press, 2016), 51.
4. Alfred Russel Wallace, "On the Tendency of Varieties to Depart Indefinitely Form the Original Type," *Zoological Journal of the Linnean Society* 3–4 (1859): 62, 58.
5. Peter J. Bowler, *The Non-Darwinian Revolution: Reinterpreting a Historical Myth* (Baltimore: Johns Hopkins University Press, 1992), 19.
6. Herbert Spencer, *The Principles of Biology*, Vol. 1 (London: Williams and Norgate, 1864), 444.
7. Naomi Beck suggests that Spencer often failed to distinguish salient differences between Darwinian and Lamarckian accounts of evolutionary processes. Naomi Beck, "The Origin and Political Thought: From Liberalism to Marxism," in *The Cambridge Companion to the "Origin of Species,"* ed. Michael Ruse and Robert J. Richards (Cambridge: Cambridge University Press, 2009), 299.
8. Beer, *Darwin's Plots*, 172.
9. Darwin writes to Galton in response to Galton's "Hereditary Improvement" that "though I see so much difficulty, the object seems a grand one; & you have pointed out the sole feasible, yet I fear utopian, plan of procedure in improving the human race" (Darwin, January 4, 1873). George Levine notes that Galton's work "impressed" Darwin (George Levine, *Darwin the Writer* [Oxford: Oxford University Press, 2011], vi). In an earlier book, Levine also

seeks to emphasize that Darwin responds to Galton by noting that "men did not differ much in intellect" (George Levine, *Darwin and the Novelists* [Chicago: University of Chicago Press, 1988], 182).

10. Sylvia Wynter, "Unsettling the Coloniality of Being/Power/Truth/Freedom: Towards the Human, After Man, Its Overrepresentation—An Argument," *CR: The New Centennial Review* 3, no. 3 (2003): 257–337, 319.
11. Diane Paul notes that "few professional historians believe either that Darwin's theory leads directly to these doctrines or that they are entirely unrelated" (Diane B. Paul, "Darwin, Social Darwinism and Eugenics," in *The Cambridge Companion to Darwin* [Cambridge: Cambridge University Press, 2009], 214).
12. Nihad Farooq, *Undisciplined: Science, Ethnography, and Personhood in the Americas, 1830–1940* (New York: New York University Press, 2016), 44. Cannon Schmitt highlights that "Victorian science and empire are inextricable" at the same time as the theories that evolutionary scientists developed also could "disallow . . . the solidity necessary for easily held conviction as to their difference, superiority or right to rule" (Cannon Schmitt, *Darwin and the Memory of the Human: Evolution, Savages, and South America* [Cambridge: Cambridge University Press, 2009], 11).
13. Marwa Elshakry, *Reading Darwin in Arabic, 1860–1950* (Chicago: University of Chicago Press, 2013), 225.

# Feminism

ALISON BOOTH

IS there a scholar who does not dream of shaping public discourse, of changing the history of a discipline, and more, of society? As we deplore the marginalization of the humanities and the silencing of public intellectuals, it might help to take a longer view of predecessors who had that coveted impact over time. I'm certainly not saying, "Recover the worthies." We can see the blind spots of reform movements 1830s–1920s, and again in the 1970s–90s. But in the #MeToo moment, we should hit the refresh button. In this brief contribution, I want to remind Victorian