



Introduction: Darwin and Literary Studies

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Roughly a decade ago, it could be said that Charles Darwin's thought was notably absent from the discipline of literary studies. Although Darwin had long been seen as an important influence on specific writers or movements—Conrad and Hardy in England, for example, or American naturalism—this influence seemed to amount to little more than a fatalist recognition of the cruel logic of a godless cosmos. A major thinker of the nineteenth century, Darwin appeared to have almost no place in the various discourses that informed twentieth-century literary analysis, from Russian formalism and New Criticism through cultural materialism and queer theory. It is true that a few important works had been written in the 1980s that explicitly brought the insights and methods of contemporary theory to bear on Darwin and his cultural and intellectual legacies: here Gillian Beer's *Darwin's Plots*, Margot Norris's *Beasts of the Modern Imagination*, and George Levine's *Darwin and the Novelists* still stand out as vibrant works of scholarship. Yet while these books are cited and praised even today, they never launched entire research programs in the manner of contemporaneous works such as Stephen Greenblatt's *Renaissance Self-Fashioning*, Eve Kosofsky Sedgwick's *Between Men*, or Slavoj Žižek's *The Sublime Object of Ideology*.

This relative absence of Darwin from literary discussion was understandable, if regrettable. After all, applications of Darwin's thought to the social, the political, and the cultural have a notorious track record, having justified both eugenicists' interventions into human reproductive rights and Social Darwinists' justifications of social and economic inequalities. Humanists could be excused for expecting that renewed efforts at Darwinian cultural analysis would only reach intellectually predictable or politically repugnant conclusions. But wariness of such reductive ideas or

reactionary agendas seemed to have quietly given way to outright avoidance of Darwin and even biology itself. An epistemological skepticism or methodological rigor regarding specific lines of argument had calcified into an unchallenged assumption that any gesture toward the biological would inevitably revive the kind of false universalisms that literary studies had spent much of the 1980s and 90s unmasking.

At the same time, outside of literary studies, just the opposite trend seemed to be happening: Darwin was assuming an ever-greater prominence in scholarly and other public discourses. During the 1990s several disciplines beyond the hard sciences, such as philosophy, anthropology, and psychology, were taking up Darwinian theory, while journalists and popularizers pumped out one best seller after another claiming to explain all manner of phenomena in terms of evolution by natural selection. In the public sphere, the most visible of these disciplines was the field of evolutionary psychology. Building on the sociobiology worked out in the 1970s by E. O. Wilson, Richard Dawkins, Robert Trivers, and others, evolutionary psychology explicitly sought, under the banner of Wilson's "consilience,"¹ to apply theoretical models from evolutionary biology to human behavior. And while its claims remain highly controversial, the discipline itself, as Dana Carluccio points out in her contribution to this issue, "has become astonishingly popular over the last twenty-five years, both as a research program and as a pop culture phenomenon" (510). Carluccio observes:

Its proliferating publishing venues, academic societies, and textbooks are echoed by journalism, novels, and movies that have trumpeted the field's hypotheses, making them as ubiquitous in US culture today as psychoanalytic notions, such as Freudian slips. Someone who has never heard of evolutionary psychology is nonetheless likely to believe that men find physical cues of female fertility (like youth) attractive because it helps them pass on their genes. (510–11)

Of course, if evolutionary psychological reasoning has passed over into pop culture or common sense—or, maybe more precisely, into what John Guillory has called "spontaneous philosophy"² ("Sokal" 476)—it might be suspected that this transition has been effortless for the simple reason that the gap was so narrow to begin with. Quasi-Darwinian pop-culture factoids concerning the infidelity of men or the industriousness of the

wealthy may resonate strongly with conventional wisdom simply because it is in conventional wisdom that they originate.

But whether or not the success of a Darwin-flavored spontaneous philosophy can be attributed (or reduced) to the ideological work that it does in a free-trading, globalizing world, it was surely predictable that Darwinism in one form or another would at last make an impact on literary studies. One way in which this impact has been felt is through the rise of a “literary Darwinism.” Trumpeted as “the next big thing” in *The New York Times*,³ this minischool proceeds from premises laid out by evolutionary psychology and sociobiology, and is often, though by no means always, hostile to the last four decades of literary theory.⁴ The basic premise of literary Darwinism is that because the human brain is a product of evolutionary adaptation, and because literature is a product of the human brain, then principles of evolutionary biology can be profitably extended to literature—first to literature as a general cultural entity (why it came about), then to broad literary categories and structures such as narrative, genre, and meter, and finally to the analysis or interpretation of particular works.⁵ Of course, the sorts of claims that this vein of research generates, along with the objections to them, will be familiar to many readers, and those conversant with the history of sociobiology and evolutionary psychology will readily discern the contours of the old debates that Andrew Brown has dubbed “the Darwin wars”: those in-house battles among evolutionists where Gould, Lewontin, and Eldredge clashed with Wilson, Dawkins, and Dennett about spandrels, punctuated equilibrium, and the value of regarding the gene as the unit of natural selection.

Although my own skepticism about the stronger claims of evolutionary psychology is no doubt evident by now, it is not the aim of this issue either to adjudicate those claims or to apply them to literary studies. (Two other journals, *Philosophy and Literature* and *Poetics Today*, have already offered special issues more strictly devoted to literary Darwinism, and collections of essays are now appearing alongside individually authored volumes.⁶) On the other hand, since this is a journal of literary criticism, it should at least be noted that debates about evolution—particularly about efforts to extend it into the cultural, political, social, and ethical domains—are consistently marked by illustrative uses of the literary. Stephen Jay Gould, for example, famously borrows a term from Kipling in objecting that sociobiology peddles “just-so stories,” narratives about the evolution of a given physical or behavioral trait that construct speculative,

fictional, and self-justifying accounts of its origin that are often unsupported, or even unsupportable, by experimental evidence (“Sociobiology” 258). Just-so stories, Gould argues, mislead us by conflating function and origin, confusing meaning and cause.⁷ For this same reason Michael Bérubé complains that sociocultural applications of Darwinism all too often conclude “that Nature herself speaks the language of Ayn Rand” (70)—that evolutionary psychology, like free-market economics, tends to affirm the existing social order as natural and the natural as desirable.⁸ To be sure, such status quo-ism is by no means universal among neo-Darwinists, but its subtle persistence as a philosophical premise sprouts up unexpectedly even when it is expressly disavowed, causing logical stumbles for those who, however unwittingly, take it as a point of departure.⁹ Thus in a broadside against contemporary theory, Joseph Carroll invokes the theodicy of Alexander Pope’s “Essay on Man,” in which Pope’s balanced definitions and neat antitheses quietly but forcefully bring multiple *alls* together into *one*:

All Nature is but Art, unknown to thee;
All chance, direction, which thou canst not see,
All discord, harmony not understood,
All partial evil, universal good:
And, spite of pride, in erring reason’s spite,
One truth is clear, whatever is, is right.¹⁰ (52–53)

Indeed, the tendency of evolutionary psychology to devolve into an atheist theodicy prompts Gould’s other famous literary reference: his characterization of sociobiologists as followers of Voltaire’s Dr. Pangloss. He quotes Voltaire’s famous optimist in order to show the fallaciousness of excessive or naive adaptationism: “Everything is made for the best purpose. Our noses were made to carry spectacles, so we have spectacles. Legs were clearly intended for breeches, and we wear them” (Gould and Lewontin 581)

Now, whether literary figures like Kipling, Pope, and Voltaire (not to mention the quasi-literary Ayn Rand) are actually needed in a debate like this may be doubted; the profusion of such allusions may indicate little more than the fact that in poems, plays, and novels, ideas are often formulated in particularly incisive ways. Scientists do tend to use literature as mere ornament rather than as a fully legitimate investigation of questions of “human nature” (Garber 28). Still, such allusions also remind us

that the literary has always been a sphere where the most fundamental and far-reaching of existential questions have been explored. Matthew Arnold famously argued that it is precisely in the wake of Darwin's discoveries, as well as of disenchanting scientific discoveries more generally, that people have "turn[ed] to poetry to interpret life for us, to console us, to sustain us." Indeed, he goes so far as to argue that "Without poetry, our science will appear incomplete" (300). It is such an Arnoldian function for literature that Deirdre Coleman discerns in her contribution to this issue when she notes that, when faced with moral and emotional crisis, J. M. Coetzee's David Lurie—a literature professor relegated to teaching "Communications" (Coetzee 3) to a "postliterate" (32) student body—"draws on his literary education to interrogate what it means to be human" (Coleman 613).

The juxtaposition of Darwin and literary study, then, by exploring the often-contested intersection of scientific and humanistic discourses, at the very least holds out the promise of addressing major questions of interest to both of the so-called two cultures. Yet it is precisely the failure to fulfill this promise that prompts another critique of literary Darwinism: that it offers only the old wine of tried-and-true interpretations in the beguiling new bottles of scientific terminology.¹¹ Literary Darwinists open themselves up to criticism, if not outright parody, when they simply redescribe Jane Austen plots in terms of mate selection and kin assistance.¹² The most compelling objection to literary Darwinism, then, may not be that it is speculative (any ambitious criticism must have the freedom to speculate), or that it leads to a conservative politics (a scholarly inquiry shouldn't be avoided because one fears its results), but simply that it fails to address the most important questions that define the discipline of literary study. In the *Phaedo*, when Socrates, awaiting death, refutes Anaxagoras, he compares the older philosopher to a person who,

when he endeavored to explain the causes of my several actions in detail, went on to show that I sit here because my body is made up of bones and muscles; and my bones, as he would say, are hard and have joints which divide them, and as the bones are lifted at their joints by the contraction or relaxation of the muscles, I am able to bend my limbs, and this is why I am sitting here in a curved posture—that is what he would say, and he would have a similar explanation of my talking to you, which

he would attribute to sound, and air, and hearing, and he would assign ten thousand other causes of the same sort, forgetting to mention the true cause, which is, that the Athenians have thought fit to condemn me. (136)

The scientific materialist explanations of muscles and bones, of sound and air (to which Socrates's leisurely elaboration satirically lends an aura of complexity), may be perfectly valid in their own domains, but they leave untouched the questions of justice raised by the stark fact of Socrates's imminent death.

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Darwin, despite his self-effacing rhetoric, did of course engage those big questions that have always occupied the poets, and he recognized that his scientific discoveries inevitably bore on human affairs. Therefore, to understand the scope of Darwin's legacy for literary studies, it is first of all essential to regard the literary not merely as belletristic ornament, nor merely as ready sociological data for investigations of patterns of human behavior,¹³ but as complex engagements with the questions—existential, ethical, sociopolitical, psychological, representational—that arise in the aftermath of revolutionary scientific discoveries. And it is precisely here that we need to discern the basic kinship of Darwin's thought with the literary theory that self-described literary Darwinists tend to reject. To some, such a recognition may appear counterintuitive: because Darwin was influenced by an English empiricist tradition running from Hobbes through Malthus and Smith to Ricardo, he is generally not linked to the body of literary theory descending from Continental thinkers like Kant and Hegel. Yet his impact on forerunners of contemporary thought such as Nietzsche, James, and Freud cannot be ignored. Keith Leslie Johnson, in his contribution to this issue, goes so far as to call Darwin the “fourth hermeneut of suspicion” (575), placing him alongside Paul Ricoeur's famous triumvirate of Marx, Nietzsche, and Freud as a founder of modern interpretive practices. Gillian Beer, who was probably the first, at least among modern critics, to notice Darwin's “extraordinary hermeneutic potential” (8), calls attention to his legacy as a philosopher of flux rather than the advocate of stability constructed by the literary Darwinists, who aim to eradicate interpretive play by establishing hard-and-fast natural

categories. Or as Johnson puts it, taking a slightly different tack, if “literary applications of Darwin’s scientific theories in recent years . . . have been slow to gather supporters,” that failure

may be because, even while acknowledging the intrigue of empirical approaches, humanities types tend to share a basic intuition: that understanding Darwin’s thought (now more than ever, as the cliché goes) is perhaps more important in its ethical and, ultimately, biopolitical dimension than in its scientific or methodological one.¹⁴ (572)

Such a claim is implicitly endorsed by Laura Otis as well, when she argues that representations of the figure of the scientist in works by H. G. Wells and George Bernard Shaw “suggest both writers’ concern with the ethics of experimentation at a time when scientific knowledge was increasing faster than awareness of its social implications” (492–93).

As it turns out, numerous scholars—apparently working independently of one another—have begun to trace the affinities of Darwin’s thought with certain lines of contemporary literary theory. The feminist thinker Elizabeth Grosz notes that questions of origin and identity make up one of “the most complex and underdiscussed elements of Darwinism, the point where Darwin’s own account uncannily anticipates Derridean *différance*” [sic] (21). Finding meaning only in differences, in interstices, “Darwin seems to produce a quite peculiar, and thoroughly postmodern, account of origin” (23). Grosz uses her close reading of Darwin to trace a line of descent running through Nietzsche and Bergson to Deleuze and Irigaray. Meanwhile, the literary historian Louis Menand, beginning with many of the very same passages in Darwin’s *Origin*, works out an intellectual lineage that positions Darwin as a precursor of the philosophical pragmatism of Peirce, Dewey, and James—a channel of thought that eventually flows into the mainstream of American literary theory. Like Grosz, Menand notes that for Darwin the idea of the species is a contingent one. He goes on to make the pragmatist point that such contingency does not nullify the value of the concept of a species, although it does radically change it: “Darwin did not conclude that species do not exist. He only concluded that species are what they appear to be: ideas, which are provisionally useful for naming groups of interacting individuals” (123). Related insights have come from the critics Ellen Spolsky and Colin Milburn, who have in the last decade independently articulated paral-

lels between Darwin's thought and Derrida's, with Spolsky specifically aiming to defang the threat that poststructuralist theory seems to pose for a cognitive-studies-oriented audience. Lastly, the Italian philosopher Giorgio Agamben, whose *Homo Sacer* and *The Open* have become foundational texts for discourse about the animal and the creaturely, shows that the old evolutionary pseudoproblem of the missing link between ape and human is nothing but a (Derridean) aporia, "a zone of indeterminacy" (37) created by definitional tension: "Like every space of exception, this zone is, in truth, perfectly empty, and the truly human being who should exist there is only the place of a ceaselessly updated decision" (38).

Just as Darwin can be conceived of as a proto-postmodernist, so sociobiology can be shown to rest on some highly Derridean premises. The arch neo-Darwinist Richard Dawkins defines the gene in structuralist, even deconstructive terms. He argues that the gene is best understood not as a single protein sequence (or cistron) at a single locus on a chromosome, responsible for the synthesis of a single protein chain, but as a retroactively identified "cause" of any given phenotypic effect:

The "effect" of any would-be cause can be given meaning only in terms of a comparison, even if only an implied comparison, with at least one alternative cause. It is strictly incomplete to speak of blue eyes as "the effect" of a given gene *G1*. If we say such a thing, we really imply the potential existence of at least one alternative allele, call it *G2*, and at least one alternative phenotype, *P2*, in this case, say, brown eyes.¹⁵ (*Extended* 195)

Biologists say a gene is "for" something only when a significant comparison can be made between two possible genetic variations and two possible phenotypic effects. Unless eye color varies within a population, biologists have no reason to identify a gene "for" eye color at all. For Dawkins, "phenotypic effects can always be thought of as *relative* to alternative phenotypic effects" (196; Dawkins's italics). This idea, he claims, is "a fundamental truism, of logic more than of genetics" (38). "It is simply meaningless," he argues, "to speak of an absolute, context-free, phenotypic effect of a given gene."¹⁶ As with Saussure's signifiers, there are in Dawkins's concept of the gene no positive terms, only meaningful differences within a system. Thus a genetic "cause" produces a phenotypic "effect" only by what Dawkins—with no apologies to Derrida and his famous chains of signifiers—calls "chains" of biological and chemical

processes: “chemical chain[s] of embryonic causes” (*Selfish* 66), “long and devious chains” (*Extended* 197), “long, ramified and indirect causal chains” (198). In fact, what the word *gene* names as the cause of a phenotypic effect is not a single cistron at a single locus on a chromosome but rather the complex interaction of many cistrons: “the use of single-locus models is just a conceptual convenience” (21). A “gene” is really a combination of cistrons working in concert (or conflict), and the particular combination that one identifies as a gene depends on the phenotypic effect that one chooses to isolate. For Dawkins, “geneticists . . . always deal with *differences*.” A gene is the sum of its effects.¹⁷

Such overlooked homologies between sociobiology and literary theory may indicate the centrality of Darwin’s thought to both. The great evolutionary theorist and historian of science Ernst Mayr maintains that Darwin dispelled not only the notion of divine creation but in fact five major philosophical tenets, principles that undergirded not only religion but nineteenth-century science as well: creationism, anthropocentrism, essentialism, physicalism, and teleology (318); and in various ways the demise of each principle reverberates through contemporary thinking. The rejection of creationism still appears, in American political discourse today, as the most menacing of Darwin’s insights, and thanks to the aggressiveness of the fundamentalist Christian political agenda, antirealism is probably the “Darwinism” most visible in the US news media. But for the Victorians this was not necessarily Darwin’s most radical insight, and certainly not his only one; his other revolutions have proved at least as durable. Antiessentialist or antitypological thinking, for example, has been central not only to the political agendas of contemporary literary and cultural studies but, much more broadly, to the mainstream of twentieth-century political liberalism; Mayr, himself a signatory to the famous 1950 UNESCO statement on racism, points to antiessentialist thinking as grounds for debunking any (pseudo)scientific racism (320). Meanwhile, Darwin’s antiphysicalism contributes to a shift from the clockwork model of the Newtonian universe to a view of science based on a “probabilism” that recognizes temporal change, emergence, and stochastic processes (a newly available understanding of nature as open and dynamic that informs Omri Moses’s interpretation, in this issue, of habit in Gertrude Stein’s work). Next, by overturning anthropocentrism, Darwin strikes an irreversible blow to what Freud later calls man’s narcissistic notion of himself as holding a privileged place in the universe. This

critique of anthropocentrism, unimaginable in its current form without Darwin, has given rise to “the burgeoning area of animal studies” (Wolfe 564), an interdisciplinary zone where political advocacy, cultural studies, Continental philosophy, ecocriticism, and biology intersect to discuss nonhuman animals and their use, representation, and theorization by human ones. Finally, Darwin’s antiteleological view of evolution—his view of the world as a continually changing work in progress—has, as George Levine argues, fundamentally reshaped the expectations that readers bring to plots and radically problematized the way that novels achieve or fail to achieve narrative resolution:

The growing nineteenth-century dissatisfactions with closure—the most marked and inevitable feature of “plotting”—are further reflections of this Darwinian movement away from teleology and . . . toward a new kind of emphasis on continuing change. (19)

Mayr’s framework, then, sketchy as it may be, offers touchstones for understanding how Darwin’s thought ramifies through twentieth-century literature, and thus why a journal taking that literature as its area of study should devote an issue to his conjunction with modern literature. For while Grosz and Menand help us to see Darwin’s impact on particular modernist-era thinkers, we can go still further and claim that Darwin makes possible modernism itself. Though it may be true that in a narrow sense the decades of modernism before the synthesis of Darwin and Mendel are marked by what has been called an “eclipse of Darwinism” (Bowler)—the prevalence of softer or more Lamarckian models of inheritance—in a broader sense the far-ranging questions opened by Darwin play out fully in various directions throughout modernist texts, and beyond them in the second half of the century. Teaching a course on the modern British novel, I cannot fail to note, for example, Cesare Lombroso’s Darwinian criminology in Conrad’s *The Secret Agent*, sociobiological explanations of womanly beauty in Joyce’s *A Portrait of the Artist as a Young Man*, repeated reference to Darwin in the psychotic visions of Septimus Smith in Woolf’s *Mrs. Dalloway*, invocations of Charles Lyell’s geological deep time in Forster’s *A Passage to India*, and the burning of a copy of *The Descent of Man* in the opening pages of Ivy Compton-Burnett’s *A House and its Head*. These multiple, various textual appearances of Darwin or Darwinian ideas suggest, perhaps, what I’ve argued elsewhere: that rather

than a Darwinian understanding of culture, what is needed is a cultural understanding of Darwin, that is, of the contradictory, dynamic, and forceful significations that his name and work have assumed over the twentieth century.

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The essays collected in this issue follow no single methodology, nor do they subordinate the field of literary criticism to experimental psychology. The works they analyze cover the chronological range of the twentieth century (and then some) from fin-de-siècle essays by W. E. B. Du Bois and T. H. Huxley to a novel of J. M. Coetzee published at the century's close. They consider literature that is lyric and satiric, realist and fantastic, argumentative and parabolic. They address issues of race, class, gender, and sexuality; and also of language, character, genre, ethics, and politics. And yet—along with the five book reviews that treat recent work on this and related topics—they coalesce into a tight cluster of common themes and ideas.

For example, almost all the essays partake of a theoretical effort to think past the timeworn nature/nurture debate. Omri Moses's discussion of Gertrude Stein emphasizes a dynamic, processual, and developmental model of evolution and situates Stein in a vitalist tradition that descends from Darwin and includes Bergson and James. This tradition discerns "a startling continuum between biology and culture" and proves particularly useful to contemporary thinking because it "contests both concepts of biological essentialism and social constructivism" (447). A key term for Moses here is *habit*, which in Stein's view—and in her practice—is a constructive force. Against orthodox neoromantic or modernist understandings of habit as deadening (akin to outworn social and aesthetic conventions), Stein's habit is a gradualist and incremental but unpredictable and lively pattern of repetition with difference, a pattern that is "not inevitable or uniform" (448). Developing at the boundary of nature and culture, the internal and external, the voluntary and the involuntary, it structures Stein's literary innovations on the level of sentence, character, narrative, and genre. Part of a nondeterministic and nonphysicalist universe, habit "is a dynamic force rather than an archive" (464). Ultimately, for Moses, Stein proves a stronger advocate for habit than even Bergson and James; she resembles more closely their teacher, Darwin himself,

who apprehends a balance between creative and conservative functions of habit. Like Darwin, “Stein concentrates attention on microevents that reveal emergent changes from an earlier precedent” (446). Moses thus challenges accounts of evolution that rely on understanding heredity as a mere blueprint, accounts of modernism that undervalue the repetitions of habit, and accounts of Stein that condemn her attention to characters as immutable types.

The mutual implication of culture and biology likewise emerges in Laura Otis’s essay, which discerns strong parallels between George Bernard Shaw’s *Pygmalion*, a social comedy of class mobility, and H. G. Wells’s *The Island of Dr. Moreau*, a science fiction adventure about traversing the species barrier. Otis points out that Wells (a student of T. H. Huxley) saw much greater promise in science than did the ever-skeptical (and stubbornly Lamarckian) Shaw. Still, she demonstrates how in both these tales of metamorphosis, the authors indict the scientist figure for an ethical indifference to the pain caused by his will-to-knowledge, and how both narratives show experimental transformations entailing complexities beyond the scientists’ anticipation or control. These parallels allow Otis to further demonstrate how, in the wake of Darwin, the discourses of class and species are of necessity interlaced: Eliza Doolittle’s class transformation is represented through animal metaphors, while the rebellion of Moreau’s “beast people” against their dictatorial ruler has clear sociopolitical overtones. Thus while Shaw’s work is often held to be more optimistic about the possibility of social change, Otis breaks with received opinion by viewing *Pygmalion* as closer to *Moreau* in that both works attack the credibility of missionary narratives of individual rescues in which Christian charity, along with cleanliness and sobriety, are sufficient to alter human (or beastly) behavior. Although neither writer endorses laissez-faire Social Darwinism, both radically test the plasticity of social structures—indeed of the social as such. In Otis’s reading, they ultimately suggest that transformation must be systemic if it is to be lasting, and that the scientist or social engineer ignores this conclusion at his peril.

Taking a slightly different angle of approach, Dana Carluccio seeks to historicize the conflict between social constructionism and biological essentialism in her examination of race in American modernism. She argues that our understanding of both modernist accounts of race and current-day debates over evolutionary psychology are incomplete if we

fail to acknowledge the prominence of Darwinian thinking in the works of writers such as W. E. B. Du Bois and George Schuyler. For Du Bois, evolutionary thinking is not a biological reductionism but rather “a middle term” (513) between the biological and the cultural that mediates by shifting attention from essences to functions. Instead of “a set of genetically controlled and fixed traits,” race becomes “an inevitable cognitive propensity to act *as if* such traits existed.” In short, Du Bois views race as a “cognitive fiction”—an “evolved technology” (515) that serves (or has served) an adaptive function. Because it directs attention to what race does rather than what it is, a cognitive fiction “can persist independently of [its] correlation to anything outside [itself]” (517).¹⁸ Carluccio mobilizes this idea of race as a cognitive fiction in a sedulously careful reading of Schuyler’s wild satire *Black No More*. Whereas Du Bois uses the notion of (seeing) race as an evolved cognitive capacity to defend racial pluralism, the pessimistic Schuyler intimates that our evolutionary inheritance has poorly equipped our minds for a modern world vastly different from the environment to which we adapted. If race is a cognitive adaptation, Schuyler’s novel seems to imply, it is one that seems now to serve only violent or exploitive ends.

Susan McCabe’s essay on Marianne Moore and Elizabeth Bishop finds in Darwin—whose work both poets knew deeply—possibilities rather than limitations, and in her reading he becomes a thinker far more intriguing than we see in the reductions of his ideas given to us by contemporary pop culture. Darwin proves valuable for Moore and Bishop in multiple ways: his naturalist’s eye for the distinguishing detail offers a model of poetic observation; his intellectual honesty provides an understanding of the natural world that is “unsentimental, even depersonalized” yet “filled with attractive anomalies and ‘originals’” (548); his imagination of slow, gradual change provides an analogy for the creative process; his empiricist’s gathering of samples mirrors a modernist process of poetic composition that entails the collecting and culling of literary specimens. Most of all, his scrupulous attention to variations, differences, and oddities allows Darwin to emerge as an early queer theorist who adumbrates models of mothering and sexuality that escape the dominant Freudian oedipal paradigm. Thus even though Darwin’s own writing avoids representation of motherhood, he still can offer—most strikingly in his discussions of artificial selection and the breeding of pigeons—unorthodox “scenarios of domestication” that contrast with the traditional ones that are gener-

ally “associated with mothering and the rearing of the young” (555). The queer figures of the male mother, the dandyish fancier, the “obsessive taxonomist” (554), the student of extinct and forgotten species, and the collector of nature’s odd variations all allow for a “break from teleological sexuality” and point the way toward “thinking beyond rigid attachment to fixed or immutable forms of embodiment” (569).

Reconnecting Darwin’s insights with those of recent theory, finally, can inform the understandings of a concept increasingly visible in literary studies, the animal. The two essays that close out this volume engage the animal—or, to use the term that Eric Santner has favored, the *creaturely*¹⁹—in both the midcentury moment of the new atomic age and the post-Cold War moment of the century’s close, when the fall of the Soviet Union and the end of apartheid awakened new political hopes but also new uncertainties. Keith Leslie Johnson’s essay on T. H. Huxley and his grandson Aldous examines the younger writer’s 1948 novel *Ape and Essence* “within the problematic of post-Darwinian ethics” (584), a problematic Johnson reads with the help of Agamben’s writings on the human-animal binary. Johnson’s essay begins with T. H. Huxley’s struggle to relate the two terms in the title of his 1893 lecture, “Evolution and Ethics,” showing how his best efforts to decouple the natural world of evolutionary change from the human realm of ethics deconstructs itself, as concepts like sympathy and justice prove too slippery to function as criteria of distinction. This philosophical struggle then serves to clarify the ethical stakes in Aldous Huxley’s post-Holocaust novel, which—from its opening invocation of Gandhi’s murder to its presentation of a screenplay describing a fantasy of warring mutant eugenicist primates—thematizes the abject body as a site where sovereign power is both exercised and resisted. Ultimately, the distinctions between human, animal, and monster matter less to Aldous than the fact of the subjection of all life to power. A Darwinian understanding of life, viewed through Agamben, helps us to discern the logic of those “alienating zones of the nonhuman within the human,” zones which “become visible in apartheid, in genocide, in anti-Semitism, racism, and so forth” (589). Through a ludicrous (and often aesthetically reviled) science fiction scenario, Huxley’s fantastical screenplay-novel illuminates the very real biopolitical fallout of twentieth-century social Darwinisms.

Deirdre Coleman’s essay engages a similar problematic at a later historical moment and in a radically different genre by turning to a

contemporary novelist central to theoretical investigations of the animal, J. M. Coetzee. Coetzee has long been concerned with human beings in the condition of abjection, and his 1997–98 Tanner Lectures at Princeton, collected as *The Lives of Animals*, have become canonical texts for suggesting how literature might challenge an anthropocentric worldview. In her reading of Coetzee's novel *Disgrace*, Coleman recognizes that Darwin is a necessary figure for contemporary theorizations of the creaturely. Working through multiple allusions in *Disgrace* to romantic writers, she finds in that earlier historical moment—by no accident, a moment just prior to Darwin's own writing—"a romantic dialectic . . . between a Malthusian population principle and a Godwinian drive of the species to perfect itself" (604). She argues that David Lurie, the novel's protagonist, understands postapartheid South Africa through an implicit interpretation of Darwin and Malthus (a Social Darwinism) that views political, personal, and sexual relations through a brutal calculus of biological competition among races to survive and reproduce—a competition in which women are relegated to the status of material resources. But Lurie's fear of "racial swamping" (601), tied to his "individual anxiety about evolutionary and reproductive failure" (607), gives way to an alternative reading of Darwin that recognizes continuity not only between races but between species. Lurie's favored romantic authors turn out, in this view, to be early theoreticians of the creaturely, with archetypal outcasts like Frankenstein's creature or Byron's Lara calling upon the reader for understanding and sympathy.

As Coleman's reading outlines a dichotomy of political possibilities for Darwinism, so the essays in this issue together indicate a richness and a multifariousness of implication to Darwin's thought that go far beyond the caricatures and slogans offered to us by today's journalism. Ernst Mayr, in the article I've quoted, notes that Darwin's ideas were "liberating" even as they "placed a new burden on modern man" (323), and he goes so far as to claim that the end of Panglossian teleology means that "If we want to have a better world it is up to us to take the necessary steps" (324). The stakes of interpreting Darwin, on this view, are high indeed. And while none of the essays collected here presumes to claim the last word on either Darwin's place in literary study or the ways in which he might point us to "a better world," taken together they all surely demonstrate that over the entire span of the twentieth century, writers have fully recognized and grappled with the freedoms and burdens that Mayr discerns.

Working to open interpretive possibilities rather than to foreclose them, these essays together demonstrate that just as literature has taken up the complex challenges posed by Darwin, so too has literary criticism.

Notes

1. A program to resolve disciplinary differences by reinterpreting all knowledge via the methods and discourses of the natural sciences.

2. Guillory takes the term from Louis Althusser. It designates a set of philosophical positions that generates and justifies research but has become so widely accepted and reproduced that it has ceased to be philosophically questioned within a given discourse community. For Guillory, “Spontaneous philosophy is something more than common sense, if also something less than adequate philosophy” (“Sokal” 476). Elsewhere Guillory describes it as “the discourse of self-description and legitimation produced alongside practice” (“Critical Response” 528) and remarks that “self-congratulation is the worst feature of spontaneous philosophy” (530).

3. Literary Darwinism, along with the related field of cognitive literary study, was recently championed in *The New York Times* with this very cliché (Cohen). So-called cognitive approaches to literature do not necessarily assume a neo-Darwinist view, and many foundational cognitive scientists (Noam Chomsky, Jerry Fodor) strongly reject some of the premises of the Dawkins-Dennett school; still, evolutionary psychology conceives of itself as fusing sociobiology and cognitive science, and in literary studies there is much overlap between the subschools.

4. See for example Joseph Carroll’s claim that “a very large proportion of the work in critical theory that has been done in the last twenty years . . . is essentially a wrong turn, a dead end, a misconceived enterprise, a repository of delusions and wasted efforts” (25). Brian Boyd, slightly less strident, writes:

The prevailing mode of literary theory in academe often calls itself simply “Theory,” as if theories like those of gravity, evolution, and relativity were nugatory. . . . Capital-T theory . . . has isolated literary criticism from the rest of modern thought and alienated literary studies even from literature itself. (384)

5. For works of literary Darwinism see Carroll, Boyd, Storey, Dutton, Dissanayake, Barash and Barash, and Gottschall. William Flesch’s *Comeuppance* is reviewed in this issue.

6. See Easterlin, Richardson and Steen, Gottschall and Wilson, Boyd, Carroll, and Gottschall.

7. This argument is central to Gould's critique of the neo-Darwinists and tends to be grudgingly conceded. Gould notes Nietzsche's arguments for the nonequivalence of "current utility" and "causes of origin" and cites the analogy made in *The Genealogy of Morals* between the sociocultural evolution of punishment and the biological evolution of organs such as the hand or the eye (*Structure* 1214). One finds, interestingly, the exact same point made by Michel Foucault: "The eye was not always intended for contemplation, and punishment has had other purposes than setting an example" (83).

8. Except, of course, when the existing order is so plainly undesirable that it cannot be justified—in which case it is human interference with nature that is blamed.

9. For an especially vivid illustration of inadvertent status quo-ism conflicting with the author's professed liberalism, see Steven Pinker.

10. Carroll claims:

The basic poststructuralist position, inverting that of Alexander Pope, is that whatever is, is wrong. I would not agree with Pope that whatever is, is right, but I would agree even less with people who are fundamentally opposed to the very principle of normative order. (26)

Note Carroll's polemical framing of his opponents' position as radical and his own as moderate.

11. See for example Tony Jackson, who finds much to endorse in the program of reconciling literary criticism with empirically oriented cognitive disciplines, but opines: "Too often it seems that the vocabulary of cognitive rhetoric is simply being plugged into the interpretation" (173). See also William Benzon's book review in this issue:

I find [Flesch's] explication [of spite and vindictiveness] interesting, but that's not the point. Is that explication useful and illuminating, does it do more than ground those notions in biology? I'm not sure that it does. . . . Thus it's not clear to me how far his literary analysis goes beyond the complex redescription of actions in biological terms. (632–33)

12. Thus it may be that the oft-perceived antitheory bent of literary Darwinism is less a simple anti-intellectualism than an antimodernism. If, as Fredric Jameson argues, modernism made the canon in its own image (179), so that

great works of the past (Pound's troubadours, Eliot's metaphysicals) were identified as those that achieved a kind of difficulty, complexity, or affective sophistication at odds with reigning bourgeois protocols, then modernism would aim to renounce those very aspects of reading, art, or literature that literary Darwinism seeks to explain. For it is of course the popular bourgeois forms of art—or indeed the earlier collective and oral forms of song and storytelling—whose evolution literary Darwinism must address if it would approach anything like the explanation of a species-wide universal. Thus modernism and the poststructuralist theory that in many ways derives from it would alike appear largely irrelevant if not downright perverse to literary Darwinism because they cultivate a specialized, sophisticated, highly trained readership. In this, then, literary Darwinists find company in that branch of left-leaning cultural studies that views high modernism as an elitist mystification of art and urges instead critical attention to popular forms.

13. For Gottschall's idea of literature as social science data, see D. T. Max.

14. *Biopolitical* is a coinage of Foucault's, used to refer to the subjection of life, bodies, populations, reproduction, and sexuality to political power; it is a major theme of Agamben's thought as well. Santner defines it as "the threshold where life becomes a matter of politics and politics comes to inform the very matter and materiality of life" (12).

15. An allele is an alternative form of the gene potentially occupying the same place on the chromosome.

16. As Dawkins writes in his earlier and even more famous book, *The Selfish Gene*:

No one factor, genetic or environmental, can be considered as the single "cause" of any part of a baby. All parts of a baby have a near infinite number of antecedent causes. But a *difference* between one baby and another, for example, a difference in length of leg, might easily be traced to one or a few antecedent differences, either in environment or in genes. It is *differences* which matter in the competitive struggle to survive. (37; Dawkins's italics).

17. One could trace a similar poststructuralist tendency in Daniel Dennett's deconstruction of the self, which he acknowledged to overlap with French poststructuralist descriptions. Dennett indeed gives a fine, if inadvertent, sketch of the Foucauldian theory of power when he attempts to illustrate his own view of the self. He claims that philosophers of mind tend

to treat the mind (that is to say, the brain) as the body's boss, the pilot of the ship. Falling in with this standard way of thinking, we ignore an

important alternative: viewing the brain (and hence the mind) as one organ among many, a relatively recent usurper of control, whose functions cannot properly be understood until we see it not as the boss, but as just one more somewhat fractious servant, working to further the interests of the body that shelters and fuels it, and gives its activities meaning. This historical or evolutionary perspective reminds me of the change that has come over Oxford in the thirty years since I was a student there. It used to be that the dons were in charge, while the bursars and other bureaucrats, right up to the Vice Chancellor, acted under their guidance and at their behest. Nowadays the dons, like their counterparts on American university faculties, are more clearly in the role of employees hired by a central Administration, but from where, finally, does the University get its meaning? In evolutionary history, a similar change has crept over the administration of our bodies. Where resides the “I” who is in charge of my body? (3)

18. Cf. Boyd, who, following David Sloan Wilson, reminds us that “Evolution . . . places no premium on truth” (205). In different contexts, both perceiving and misperceiving truth can be advantageous.

19. Santner distinguishes his psychoanalytically informed approach from those whose primary aim is “to break down the boundaries between the human and the nonhuman.” Rather than stressing human similarity to or solidarity with the nonhuman animal, he emphasizes instead “creaturely life as a distinctly human dimension” (18).

I would like to thank Lee Zimmerman, Naomi Liebler, and David Greenberg for their comments on this essay. I would also like to thank Professor Andrew Weiner of Spaightwood Galleries in Upton, MA, for his help in securing permission for the image on the cover of this issue.

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