

Schuller, Kyla. "Taxonomies of Feeling: The Epistemology of Sentimentalism in Late-Nineteenth-Century Racial and Sexual Science." *American Quarterly* 64, no. 2 (2012): 277–299.

Abstract

"Taxonomies of Feeling" explores how sentimentalism shaped racial and sexual science through examining the work of the American School of Evolution. I argue that this once-prominent School translated the sensationist epistemology of the era, in which the senses mediate all knowledge, into a theory of species and race formation. In their view, species originated in sense-based experience and civilization originated in sentiment, granting individuals and especially the civilized control over their own evolution. As sensibility and sentiment denoted a susceptibility to both progress and degeneration, I show how their concept of sex differentiation attempted to work out some of the contradictions of the sentimental body. Overall, the piece advocates a rethinking of sentimentalism as a scientific epistemology and suggests how the discourse of feeling shaped the modern logic of biological difference in scientific as well as literary fields.



Project
MUSE[®]

Today's Research. Tomorrow's Inspiration.

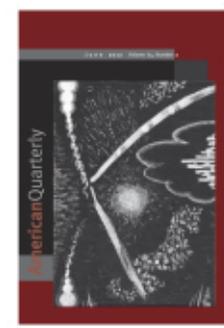
Taxonomies of Feeling: The Epistemology of Sentimentalism in Late-Nineteenth-Century Racial and Sexual Science

Kyla Schuller

American Quarterly, Volume 64, Number 2, June 2012, pp. 277-299 (Article)

Published by The Johns Hopkins University Press

DOI: [10.1353/aq.2012.0023](https://doi.org/10.1353/aq.2012.0023)



➔ For additional information about this article

<http://muse.jhu.edu/journals/aq/summary/v064/64.2.schuller.html>

Taxonomies of Feeling: The Epistemology of Sentimentalism in Late-Nineteenth-Century Racial and Sexual Science

Kyla Schuller

Woman suffrage and the presence of Africans and their descendants in the United States signaled the “two perils of the Indo-European,” leading paleontologist Edward Drinker Cope insisted in 1889.¹ Cope’s cohort of late-nineteenth-century paleontologists, herpetologists, and others in the self-declared “American School of Evolution” resoundingly agreed.² Challenging Charles Darwin’s theory that species change occurs through random variation and the struggle for existence, Cope and the American School championed the Lamarckian belief that acquired characteristics (such as muscle strength and maternal skills) would be transmitted to descendants. Scholars have often reductively interpreted Lamarckian evolutionary theories as progressive alternatives to so-called social Darwinism, for, as Cope’s associate Joseph Le Conte remarked, “All that we call education, culture, training, is by use of these [Lamarckian factors].”³ In this view, reform, not interspecies struggle, guides species change. Why, then, would a group of Lamarckian evolutionists claim that the expansion of the suffrage and a multiethnic citizenry posed the most significant threats to the progress of the Indo-European race?

Exploring their vitriolic political rhetoric illuminates the significant, yet overlooked, role that discourses of sentiment and sensation played in nineteenth-century U.S. evolutionary science. In this essay, I suggest that our understanding of nineteenth-century sentimentalism ought to take into account not only Harriet Beecher Stowe’s imperative of “feeling right” but also Cope’s notion of “right feeling,” in which he locates the “source” of the supremacy of U.S. civilization in its ability to maintain gender differentiation and restrain primitive impulses.⁴ From the late 1860s until his death on the eve of the twentieth century, Cope, the zoologist Alpheus Hyatt, the invertebrate paleontologist Alpheus Spring Packard Jr., the geologist Le Conte, and others developed a theory of evolution built on a particular understanding of the interplay of sensation and sentiment. These “neo-Lamarckians,” and most of all

Cope, argued that the mechanism of species change was not the “promiscuous” variation of natural selection but the “self-control” of “intelligent selection.”⁵ In this vitalist process, an organism’s “impressibility”—that is, its “capacity for response”—shapes its physical form.⁶ Conscious responses to sensations of pleasure and pain create impressions on the nervous system, and repeated impressions gradually enlarge the stimulated area, creating a physical modification that offspring inherit. Eighteenth- and nineteenth-century scientists understood “sentiment” as an emotional response to a physical impression.⁷ Over time, these scientists argued, the faculty of sentiment appeared in the most advanced species and races. “Natural benevolence of and generosity of character, and sympathy for other persons,” in Cope’s words, thus guides the pursuit of and response to sensations among these allegedly advanced groups.⁸ In short, sentimental feeling directs the physical evolution of the civilized races. Cope’s work was “taken seriously by all late-nineteenth-century naturalists,” according to a prominent historian of evolutionary science, suggesting that the scientific community considered his theory plausible rather than far-fetched.⁹

The interlinked discourses of sensibility and sentimentalism functioned as a theory of knowledge that the American School of Evolution both drew on and actively furthered. I argue that the American School translated the era’s empiricist epistemology, or the idea that knowledge derives from sense-based experience, into a theory of species, race, and gender formation. In their view, species originated in sensory stimulation and civilization originated in the faculty of sentiment, granting individuals, and especially the civilized, control over their own evolution. Yet discourses of sensibility and sentimentalism present their own instabilities. Sensitivity denotes both the capacity for growth and the possession of nervous “susceptibility,” a characteristic especially overdeveloped among wealthier women.¹⁰ Sensibility posed both the potential for progress and an unwelcome vulnerability to degenerating influence; sentimentality frequently verged on hysteria. I show how Cope’s and Hyatt’s concepts of sex differentiation and sympathy work out some of the contradictions inherent in sentimental theories of progress. To resolve this paradox of feeling, the American School bifurcated the civilized body into a two-part unit, reunited in reproduction. The Anglo-Saxon female absorbs the instability of impressibility and its tendency to excess, leaving her male counterpart to enjoy the benefits of *sentiment* while relieving him of the liabilities of *sentimentality*. To these evolutionists, restricting the suffrage and deporting African Americans were necessary measures to maintain the dynamic attraction between civilized feminine sensitivity and masculine justice that propelled racial advance.

The American School of Evolution's extended use of the sentimental rhetoric of feeling points to several ways scholars might rethink the politics and practices of sentimentalism. These scientists' work reveals the continued and surprising presence of sentimental discourse in U.S. science well into its period of professionalization and illuminates how sentimentalism's epistemological function appealed to a wide range of nineteenth-century writers and readers. Additionally, the American School's research provides a new angle on the politics of the sentimental account of the embodied nature of emotion. These scientists understood sentimental feeling, when expressed through a heterosexual couple, as a subjugation of the organic body to the allegedly higher faculty of sentiment. Their work illuminates how sentimentalism contains a fantasy of the ability of the civilized to master the biological body.

Science and Sentimentalism

Until recently, literary and historical scholarship positioned scientific practice and sentimental discourse as polar opposites according to most meaningful categories of distinction. One principal exception proves the rule. For example, some historians of science dismissed midcentury naturalists as "sentimental amateurs" who befriended their animal specimens at the expense of developing objective quantitative and qualitative research methods.¹¹ While this charge seemingly acknowledges the historical presence of sentimentalism in the practice of science, more often such thinking creates an epistemological divide that distinguishes professionalizing postbellum science from its emotional and therefore idiosyncratic predecessor. By this logic, science became science the moment it ceased to be sentimental. More recently, scholars such as Dana Nelson and Thomas Hallock have shown how sentiment sustained networks of scientists in the days before and during professionalization, creating bonds between researchers that enabled a scientific community to form.¹² On the other hand, literary critics studying the relationship between the discourse of feeling in domestic novels and the life sciences have tended to rely on long-standing binaries of private versus public, interiority versus exteriority, and subjectivity versus objectivity to draw sharp distinctions between domestic fiction and scientific practice.¹³ Yet as feminist science studies scholars such as Emily Martin and Donna Haraway have shown, scientific meaning is deeply embedded in larger cultural narratives. To that end, it is little surprise that one of the most prominent intellectual and cultural traditions of the late eighteenth and nineteenth century shaped scientific as well as literary output.

Empiricism depends on embodied, sensory knowledge. Sentimentalism not only sustained a network of affiliation between gentlemen naturalists but also provided an epistemology. The discourse of sensibility, which arose partly from physiologists' efforts to understand the nervous system and its relation to perception, represented an epistemological bedrock of scientific empiricism.¹⁴ Scholars often point to the role of Louis Agassiz, the most prominent scientist working in the nineteenth-century United States and mentor to many members of the American School of Evolution (though not Cope), in ushering in the professionalization of science and the development of empirical research methods. A brief examination of an infamous passage from his writings suggests how sensibility discourse informed Agassiz's scientific method. Soon after emigrating from Switzerland to the United States in 1846, Agassiz wrote to his mother that he had experienced his first "prolonged *contact* with negroes." Until that moment, he had opposed the burgeoning theory of polygenesis, which considers each "race" to be a distinct species descended from unique ancestors. His encounter with African American waiters in the dining room of his Philadelphia hotel, however, compelled him to revoke his commitment to the theory of the unity of human origin in a single Edenic pair. Despite professing "pity" for "this degraded and degenerate race" that "fills me with compassion in thinking of them as really men," he related that it was "impossible for me to *repress the feeling* that they are not of the same blood as us." Proclaiming the necessity of "truth before all," he confesses that he "can scarcely dare tell . . . the painful *impression* that I received, so contrary was the *sentiment* they inspired in me to our ideas of the fraternity of humankind." The scientist reported that this "impression" was a direct result of his corporeal exposure to the "advanc[e]" of the waiter's "hideous hand toward my plate."¹⁵ Registering his sensibility of the waiter's presence as a penetration of his bodily space, Agassiz pivoted to the threat he feels a multiethnic society poses "for the white race," apostrophizing, "God protect us from such *contact!*"

Stephen Jay Gould, who first translated and published this passage in its entirety, cites the excerpt's ghastly racism as an indication that the naturalist converted to polygenesis on account of the superficialities of "immediate visceral judgment" and professional pressure, rather than the "deeper" evidence of Agassiz's own scientific research.¹⁶ Yet the language of "sentiment," "feeling," "impression," and "contact" was a constitutive element of nineteenth-century science, structuring methodological approach, analytic object, and professional strategy.¹⁷ Through relating his impossibility that was at once emotional and physical, Agassiz formulates an embodied epistemology as the basis of his empirical observation.

The role of sensation and sentiment in scientific empiricism suggests the utility of analyzing sentimentalism as an epistemology, rather than as a mode, genre, discourse, or a politics. The idea of physical impressibility at the core of this theory of knowledge originated in John Locke's conception of the human body and mind as a *tabula rasa* gradually inscribed by experience. David Hume and others elaborated that all emotions and ideas stem from impressions. Clarifying the overlapping meanings of the terms *sensibility* and *sentiment* helps illuminate the epistemological function of these intertwined discourses that shaped multiple pursuits, including literature and science. Fiction writers and physiologists alike theorized "sensibility" as the faculty of receiving impressions, or "an organic sensitivity dependent on brain and nerves."¹⁸ In this "impression theory of sensation," the more refined and delicate the tissue, and by association the individual, the greater the organism's capacity for impressibility. Heightened impressibility leads to growth and the acquisition of knowledge.¹⁹ Those of the higher classes, especially women, were thought to have highly responsive natures and a correlated delicacy that frequently threatened weakness.²⁰ By contrast, many insisted with Cope that coarse, "unimpressible, and little sensitive" constitutions characterized the capacious category of the "primitive."²¹ The closely allied "sentiment," in turn, marks an emotional response to a physical impression and connotes a refined rather than an impulsive quality. Like sensibility, sentiment can also signify a delicacy of feeling, prone to excess. As scholars have widely recognized, sentiment describes a phenomenon at once mental and corporeal. Jessica Riskin's groundbreaking *Science in the Age of Sensibility* (2002) reveals what she calls the "sentimental empiricism" of French Enlightenment physics, mathematics, and chemistry by showing how scientists argued that knowledge of the natural world stemmed from an "openness" to "physical sensation" and "originate[d] equally in emotion" that such sensations provoked. Riskin argues that, overall, "sentimentalism was integral to the method of Enlightenment science as a whole."²²

Rethinking sentimentalism as an epistemology that informed race science also demands a rethinking of the ontology of the sentimental body. Agassiz was hardly alone in his belief that his somatic sensibility posed both great promise (his impressibility denotes a providential capacity to arrive at new knowledge) and peril (his impressibility denotes an unwelcome vulnerability to negative influence). In an evolutionary context, impression theories suggest that the cultural environment affects the body's physiological and psychological properties. For example, reformers argued that a middle-class Protestant household stimulates ameliorative adaptations, whereas a Five Points tenement street triggers atavistic regressions among its residents. As the historian

of anthropology George Stocking Jr. has shown, the operative notion of race and the body in the nineteenth century was not biological determinism, as scholars frequently assert, but rather a Lamarckian “sociobiological *indeterminism*.” The body was understood as a “biocultural” formation, he explains, in that culture impresses itself directly on its material and produces inheritable traits; conversely, physicality shapes behavior.²³ Affective experiences mold the plastic body of the civilized races; civilizing races have less flexible constitutions. As such, familial and cultural traditions produce corporal changes at a rate relative to the individual’s degree of racial advance. At the conclusion of Lydia Maria Child’s novel *A Romance of the Republic*, for example, the wealthy Mr. King seeks to demonstrate that whites may “bring [African Americans] all up” to the “level” his class deems prudent by hiring a formerly enslaved couple as domestic servants. After working for the Kings for three years, “the improvement in [Henrietta’s] appearance impressed [Mr. King] greatly,” though “her features were not handsome” and her “black hair” remained “too crisp” to conceal her “brown forehead.”²⁴ This notion of race as a relative account of the body’s affective capacity confounds any presentist attempt to draw a tidy boundary between the relative effects of heredity and environment or between the emotional and physiological dimensions of feeling in nineteenth-century thought. The impressible body materializes a palimpsest of the past and a blueprint for the future in which the sense and sentiment of one’s ancestors and descendants layer on each other in ways that promise either increasing mobility or paralyzing stasis. In the sections that follow, I explore how Cope and the American School of Evolution drew on sentimental discourse to posit that self-control and reflective feeling could manage the mutability of the sensible, civilized body over time.

The Origins of the American School of Evolution

Divine providence, private feelings, familial care, and cultural context shape the growth of the individual according to sensibility discourse. The publication of *On the Origin of Species* in 1859, which argues that natural law, rather than divine guidance and individual choice, drives the development of life, presented a significant new viewpoint and provoked a range of responses. Darwin’s work both thwarted and inspired social reformers’ efforts to understand how emotional discipline and Christian devotion could manage bodily and racial development. Many were unsettled by Darwin’s supplanting of the unfolding of divine plan by the organic time of the animal body, but nonetheless Darwin inspired some U.S. writers to bring social law, natural law, and

divine law into harmony. One response, pervasive in the United States, was a sentimental-Protestant interpretation of evolution premised on Anglo-Saxons' ability to discipline the body's impressibility, and thus evolutionary development, through sentimental self-control.

Among scientific circles, the most visible of these attempts was that of Cope and the American School of Evolution. The School's period of activity from the late 1860s into the early years of the twentieth century coincided with the increasing professionalization of science, a process that both helped and hindered their work. Cope struggled throughout his career to secure one of the long-term academic appointments for researchers that began to appear during the 1860s and 1870s.²⁵ His difficulty in finding a permanent post suggests the relatively measured pace at which the academic institutionalization of science proceeded. In contrast, advances in printing and distribution technologies and networks that revolutionized the print culture of the midcentury United States provided much of the material conditions for these scientists to broadly circulate their research, which reached an audience far larger than that of the preceding generation of scientists sustained by private, intimate networks. As the century came to a close, new popular periodicals on scientific and social thought such as the *Monist* and the *Open Court* offered these researchers, especially the religious Cope, a wide platform.²⁶ The simultaneous currency and prestige of these scientists' work suggests the overlap between popular reading and scientific research enabled by the as-yet-incomplete professionalization of science.

Hoping to discredit random variation as a plausible account of the origin of species difference, the American School adapted the sensationist account of knowledge creation and turned it into an explanation of species and race modification. They doubled back on the epistemology of sensibility and sentiment by drawing on the French naturalist Jean-Baptiste Lamarck's (1744–1829) account of evolution to supplement the Darwinian theory of natural selection.²⁷ Earlier in the century, Lamarck had inaugurated the discipline of biology and produced one of the first plausible accounts of evolutionary change by extrapolating from the discourses of impressibility and sensibility. According to the late-eighteenth-century "impression theory of sensation," upon a stimulating impression, the affected body part contracts as nervous fluid rushes toward the brain to communicate its impression. The brain then dispatches a returning flush of fluid, which swells the affected part and results in action. Lamarck made two distinct contributions to impression theory in his landmark *Zoological Philosophy* of 1809. First, he argued that repeated sensations create an animal's shape. "Animal orgasms," Lamarck explained,

not only denote “the special affection” most commonly associated with the term but also describe select animals’ capacity to receive impressions.²⁸ If an “exciting cause” habitually recurs, he stated, repeated waves of “an invisible, expansive, penetrating fluid” enlarge the stimulated part of an animal’s body.²⁹ Conversely, a protracted absence of stimulating activity induces atrophy. For Lamarck, an animal’s form is a result of its habitual function. In his second major innovation in the discourse of impressibility, Lamarck proposed that sexual reproduction transmitted these physical adaptations—such as a lengthened finger or a shortened thigh—to the next generation. His most famous example of this principle of the inheritance of acquired characteristics, which is also known as Lamarckism, contends that giraffes possess long necks as a result of centuries of reaching upward to graze in tall treetops. Among most life forms, sensibility and resulting actions guide the development of the species. In other words, function determines form. Among the most advanced species, however, Lamarck proposed that sentiment—or an emotional response to a physical sensation—motivates the body’s movement and development. Building on the distinction between fine and coarse sensibilities developed by naturalists including Comte de Buffon and Pierre-Jean-Georges Cabanis, Lamarck theorized a hierarchy of feeling in which morality and interior sentiment guide the growth of the most advanced animals. Among most life forms, a passive reaction to stimuli guides the development of the species. Among the “most perfect animals,” however, Lamarck proposed that an internal feeling and, among humans, a “moral sensibility” dispatch nervous fluid to muscles and thus guide physical changes.³⁰ Lamarck’s schematic safely places the agency of evolution under the control of the organism itself, especially among those allegedly higher animals whose habits are mediated by the advanced faculty of sentiment.

Taxonomies of Feeling

Calling themselves the “neo-Lamarckians,” Cope and the rest of the American School of Evolution expanded Lamarck’s principles into a theory of development that could displace Darwinism as the sole and most compelling account of species change.³¹ Their chief innovation was to recast the popular traditions of sensibility and sentimentalism as the origins of species variation. Cope conceded that natural selection functioned as a kind of “tribunal” that determined which adaptations would persist in future generations, but insisted that he, and not Darwin, had accounted for the “origin” of species variation in the first place.³² “Intelligent selection,” rather than natural selection, best describes the

origin of new adaptations and new species. Making a “plea” on “behalf” of Lamarckian principles of evolution, he explained that Lamarck’s theory of use and disuse accounted for the origin of new variations.³³ Repeated use enlarges a body characteristic, whereas lessened activity causes it to diminish, and the next generation inherits these modifications its ancestors’ bodies underwent. “In so far as sensations or states of consciousness are present, they constitute a factor in the process,” Cope wrote, “since they enable an organism to modify or change its stimuli.”³⁴ Less cautiously, Cope explained that all organisms, including “even the lowest *Protozoön*,” have sensibility, or some degree of will and consciousness that directs their desires and habits.³⁵ Sensibility thus guides species change through the organism’s conscious pursuit of pleasure and avoidance of pain, such that “the movements and habits of animals . . . lie at the foundation of the principal characters.” “Ornamental” characteristics, however, “are the direct result of the physical impress of the environment” on the nervous system.³⁶ Over time, conscious acts become instinctual behaviors. “All life-processes which are now automatic and mechanical were originated in sensation.”³⁷ Refusing Darwin’s rejection of human agency, the American School subjected life itself to individual feeling.

Whereas Darwin’s work posits that organisms inherit a bodily structure from their parents, the neo-Lamarckians asserted that organisms inherit the *energy* to make a structure. This energy is rooted in the nervous system and varies according to ancestral levels of development.³⁸ Impressions drive not only the changing morphology of the body but also mental and social development over ontogenetic and phylogenetic time (i.e., over the life of the individual and the life of the species). Differential impressibility accounts for the differential development of mental and emotional faculties among and within species and racial groups. Memory, Cope explained, is the registering of an impress on the mind. “Those in which these impressibilities are most highly developed will accumulate mental acquisitions most rapidly; in other words, they will be the most *intelligent* of their species. . . . those in whom consciousness most frequently recognizes events will *originate* new acts and habits.”³⁹ Their account of mental development borrowed from late-eighteenth-century work on the physiology of sensibility by Buffon, Cabanis, and Anthelme Richerand, in which tissue was largely distinguished as either fine or coarse. Tissue with the qualities of fineness, impressibility, and intensity (the latter of which determines the speed in which energy is converted into brain tissue) formed the brains of species and races evolving toward increasingly advanced states. According to Cope, heterogeneous impressibility drives the variability among species that results in evolutionary change.

Cope argued that sensibility, or the ability to receive impressions, also drives the appearance of advanced characteristics. According to his theory, particularly sensitive beings remember their impressions through memory, which is then transmitted to the next generation as instinct, enabling these descendants to achieve a higher stage of development. Bureau of Ethnology director John Wesley Powell went so far as to claim that the repeated exercise of the capacity of sensation developed “the endeavor to secure happiness,” evident in the ways that “the cubs of the bear dance on the greensward; the swallow floats on the air with lilted wings of joy; the trout plays in the brook as if sunlight were elysium.”⁴⁰ If advanced evolution is a consequence of sensation, then animals have demonstrably developed consciousness and desire, and the pages of the *American Naturalist* were filled accordingly with reports of friendly snails, sensitive horses, sympathetic bulls, highly cognizant cats, and same-sex pairs of geese throughout the last two and a half decades of the nineteenth century.

The sensationist framework in which the fineness of physical tissue corresponds to delicacy of emotional feeling proved useful to racial scientists such as Cope and Hyatt. Drawing on impression theory, they forged a causal relationship between bodily form and emotional and intellectual development. Cope’s work in comparative anatomy advanced the Lamarckian assumption that behavior determines physical shape to assert that anatomical features express a race’s level of mental evolution. “The constant qualities of the mind should be expressed, if at all, in the permanent forms of the executive instrument of the mind, the body,” Cope explained, as mental activities “impress themselves on the external as well as the internal organization.”⁴¹ Among the civilized races, a sensitive face manifests the sensitive nerves underneath the skin. Among the less developed, however, a turgid impressibility meant that the basic act of maturation used up each individual’s finite quantity of growth force. Cope’s work in comparative anatomy offered alleged proof the primitive races directed an overabundance of growth-force toward bodily development; his illustrations compared gross racial caricatures of African Americans with idealized Greek statues. He surmised that black mental development “stagnated” as a result. “Only certain types have been susceptible of [*sic*] evolution,” he cautioned, and blacks represented “dead material” unable “to properly direct the force of animal desire” and thus to advance. Given the impossibility of preventing sexual relationships between African Americans and Anglo-Saxons that would “cloud or extinguish the fine nervous susceptibility, and the mental force” of the Indo-European with “the fleshy instincts and dark mind of the African,” he concluded that forced colonization schemes were the only way to ensure the continued sensitivity of the civilized.⁴² Laura Briggs has pointed out some

of the material consequences of the widely held view of the insensibility of the “savage.” She demonstrates how gynecology as a field and the obstetrics procedure of the cesarean section originated in unanesthetized surgical experimentation on enslaved and free African American women. Surgeons proclaimed that black women’s “failure to receive impressions upon the nervous system” rendered them insensate to pain.⁴³

In contrast, the alleged supple impressibility of the civilized races ensured that they continuously developed new, hopefully advantageous, physical and mental characteristics. Most important among these was the capacity for sentiment. Cope argued that the advanced “social life and the family relation” of civilization “have developed the benevolent sentiments and the affections,” as the effects of evolution became the stimuli themselves.⁴⁴ This faculty enables the attainment of “moral sense”—both “the knowledge of ethical truth” and “the sentiment or affection of the love of ethical right”—“the highest development of humanity.”⁴⁵ Le Conte surmised that “sympathy, pity, [and] love” drive species change among the most advanced races, freeing them from the indignity of struggle.⁴⁶ Sentiment ensures that the actions of the civilized are directed toward a larger social good, rather than toward private pleasure. Sentiment, in these scientists’ work, involves the ability to make an appropriate and sympathetic reaction to an impression, rather than an impulsive and self-serving one. Cope and his cohort posited that racial progress stems from the ability of the civilized to control the impulses of their body through the faculty of sentiment. Hence for Cope, “evolution is . . . the long process of learning how to bring matter into subserviency to the uses of mind,” or the sublimation of the body to sentimental “self-control, from the material as well as from the mental standpoint.”⁴⁷

Sympathy, the prized affective state of sentimental discourse, plays a central role in this evolutionary theory. In her recent analysis of the role of sympathy in late-nineteenth-century sciences of the mind, Susan Lanzoni argues that late-nineteenth-century psychologists and philosophers believed sympathy to increase with evolutionary advance. For Herbert Spencer, sympathy is the “awareness of consequences,” or an access to the future as opposed to the primitive “impulsivity” of “reflex-oriented” responses, which are mired in the eternal present. Other scientists proposed that a “savage would throw a crying baby to the ground because of ‘torpid sympathy.’”⁴⁸ Scientific articulations of sentimentalism clarify that sympathy has an intercessory and teleological function, in that it ensures that civilized responses to stimuli benefit racial progress. For Cope, sympathy enables the civilized to transform basic impulses of pleasure or pain into a moral feeling that considers the social good,

yet still ensures individual development. Cope characterized sympathy as an advanced faculty evolving from sentiment that acts as a gatekeeper between the impressible civilized body—especially the more delicate female constitution—and its environment. This mediating capacity assures that those who possessed it could overcome the threats inherent in the impressible body, for sympathy allowed them to transform others' suffering into opportunities for personal growth, rather than possibilities of degeneration. On account of its developmental function, Cope declared that sympathy is ultimately in one's own self-interest: "The affections or sympathies should be developed sufficiently to produce a desire for the happiness of others, through the pleasure the happiness of others gives us."⁴⁹ Presenting the formula of the domestic novel as evolutionary doctrine—that making others feel good, especially those beneath you in social stature, brings its own reward—Cope lays bare the function of sympathy as building the actor's character. His emphasis on the asymmetrical relations of sentimental sympathy anticipates Glenn Hendler and Elizabeth Barnes's analysis that such sympathy functions as an "act of imagining oneself in another's position" that ultimately works to constitute the self.⁵⁰ Sympathy both increases and regulates the body's affective experiences.

Their emphasis on the reflective quality of sentiment, as opposed to the immediate and impulsive acts of sensation, suggests a final way in which the American School drew on the epistemology of sentimentalism in its attempt to supplant the influence of Darwinism. As Dana Luciano has recently shown, nineteenth-century U.S. sentimentalism marks "a way of using deployments of mixed feeling (pleasure and pain) to negotiate problems in time," a concept in considerable flux throughout the century. For these evolutionists, fundamentally concerned with the narration of temporality, sentimentalism proved a rich resource with which to challenge Darwin's account of evolutionary time as a ruthless, senseless process. In the first half of the century, Luciano argues, a wide variety of writers and lecturers understood grief as a way to access a sacred, affective time that connected the grieving subject to the rhythmic, repetitive cycles of the organic and offered protection from the linear, relentless, forward-moving temporality of national progress. Whereas sensation "signals a mode of intensified embodiment in which all times but the present fall away—a condition simultaneously desired, in its recollection of the infantile state, and feared, in its negation of social agency," in contrast, "a morally regulated sentimentality," manifest particularly in the capacity of reflection, "properly disperses feeling across time."⁵¹ Cope and the American School adapted sentimentalism's function as a measured, reflective orientation of the civilized subject in time into an evolutionary discourse that gave the

civilized the ability to manage the future development of the race. In keeping with their political paradigm, this entailed reworking affective feeling as a sacred time *outside* the linear time line of national development and instead positioning affective feeling as the *means by which* the organic body could be brought in line with national and imperial progress.

The American School drew on the epistemology of sentimentalism to assert Anglo-Saxons' capacity to subjugate the cyclical rhythms of organic time to the service of the linear progress of national development. Even more so than most nineteenth-century evolutionary scientists, the American School framed its intervention as a racialization of temporality. It championed the cyclical theory of recapitulation, in which fetuses literally retrace the development of their ancestors in the womb, only fully reaching the evolutionary plane of their parents at puberty. Cope and Hyatt interpreted their collections of fossilized dinosaurs and cephalopods as evidence that different species exhibit parallel development, such that evolutionary change is best depicted not as a branching tree but as multiple parallel lines of differing length. Historians of science marvel at Cope and Hyatt's commitment to an orderly, teleological vision of organic growth. Recapitulation theory rearranged the spatial distinctions of polygenesis as articulated by Agassiz and others, who imagined species created especially for each of the earth's continents. Recapitulationists instead placed human races along a time line; all humans have common ancestors, yet primitive peoples represent humanity frozen somewhere near the dawn of civilization. Having just scraped by in the ascent from the stage of nonhuman animal, these peoples were thought to have maximized their evolutionary potential before developing the advanced faculty of sentiment. That Anglo-Saxon children, Cope argued, are identical to the racial stage of "the infancy of civilized man" can be proved by the similarities in their artistic production, language acquisition, and architectural construction.⁵² Nonetheless, civilized youth had inherited such an abundance of sensitive tissue and the ability to manage it through sentimental feeling that they flew through the stages of barbarism that nonwhites repeated century after century. In the post-Darwinian context, the sentimental premise that refined feeling enables the transcendence of the physical body promised Anglo-Saxons a correlated control over natural time both cyclical and linear.⁵³

The work of the American School has attracted limited attention in the history of science, a field that has traditionally favored proponents of theories that stand the test of time. Cope has a distinguished scientific record—he published more than any scientist in U.S. history, authoring more than thirteen hundred articles and two monographs, and identified (and often unearthed

himself) more than six hundred species of extinct vertebrates. He is best known to posterity, however, for his extravagant and even violent attempts to sabotage O. C. Marsh, his rival dinosaur-hunting paleontologist.⁵⁴ Yet Cope's belief that function determines form, and that these adaptations are transmissible to descendants, was widely embraced by late-nineteenth-century paleontology.⁵⁵ Similarly, the cultural politics of evolution in the postbellum era echoed the teleological narratives of Cope and his cohort far more than they indicated an embrace of the population pressures of natural selection, an element of Darwinism that population geneticists and others brought to the forefront when they synthesized Darwinism with Mendelian genetics in the 1920s and 1930s.⁵⁶

Yet in turning to the epistemology of sentimentalism to manage the lengthening temporalities of the post-Darwinian organic body—linear growth now extended back into deep time as well as forward to eternal harmony on earth—Cope and his cohort were in the company of a wide variety of U.S. authors, scientists, and reformers. Allied colleagues such as the philosopher Charles Peirce “willingly confess[ed] to having some tincture of sentimentalism in [them], God be thanked!” and heralded the powers of love as evolutionary forces.⁵⁷ Many Anglo-Saxons looked forward not just to ongoing biosocial evolution but also to a millennial ascent into perfection in which the kingdom of heaven would be realized on earth. Reformers drew on sentimentalism and evolutionary theory (usually a Lamarckian interpretation of Darwinism that granted ample agency to human intervention) to postulate that the civilized races could shape the growth of primitive peoples by managing their sensations and thus the impressions absorbed by the body. The abolitionism of Harriet Beecher Stowe and Lydia Maria Child pivots on their belief that African American imitation of the habits of the civilized would trigger a gradual physiological and cultural development. Approaches to evolutionary progress emphasizing the role of sensibility and sentiment were also attractive to African American feminists such as Frances Harper and Pauline Hopkins, who were eager to interpret racial thinking in ways that might promote the economic and social justice aspirations of the emerging black middle class. Combined efforts of white abolitionists and African American feminists suggest the political appeal of sentimental evolutionary theories that emphasized the agency of the civilized over species change. The popularity of ideas like these led Julian Huxley to believe that the late nineteenth century marked “the eclipse of Darwinism” in the United States.⁵⁸

Men's Sentiment, Women's Sentimentality

Yet sentimental sympathy exacerbates the vulnerability inherent to sensibility even as it suggests a blueprint for individual and racial development. In fact, Cope's promise that the civilized races can discipline the growth of the organic body through the capacity of sentiment was far from watertight, according to the logic of sentiment itself. The long-standing Western idea of delicacy as signifying both "refinement and debility" captures the fundamental instability at the core of discourses of sensibility and sentimentalism.⁵⁹ The hydraulic model of the body common to both sentimental discourse and materialist science implies that the harmonic balance of the sentiments is continually on the verge of destabilization. The capacity for delicate feeling can easily swell into an outlandish susceptibility to impressions. Whereas domestic novelists tended to work out sentimentalism's categorical volatility by emphasizing their middle-class heroines' ability to achieve an upper hand over their vulnerable corporeality, race scientists did what they do best: they taxonomized. The American School steadied the dynamism of the biocultural body by elaborating on sexual differentiation.

Degeneration theory signals the threat that elites felt the affective quality of culture posed to the permeable bodies of the civilized. Many intellectuals of the Gilded Age voiced concern that the dependence of progress on an increasing amount of sensibility and sentimentality and a decreasing level of manliness would render an effete "overcivilization" unprepared for the responsibilities of empire.⁶⁰ They offered a variety of protective measures ranging from confining middle-class women to roughing up middle-class boys. For their part, late-nineteenth-century evolutionists and racial scientists, and especially those affiliated with the American School, addressed the paradox of refinement by dividing the civilized body into two interdependent units, male and female. In this dimorphic pair, the adult female absorbs the instability of impressibility and its tendency to hysteria, absolving her male counterpart of the excesses inherent to delicate feeling.

Cope, Hyatt, Le Conte, and others made clear that the "bisexual organization" of civilization consisted of one distinctly superior and one inferior component.⁶¹ In a widely read essay, Cope explained that woman, yoked to family life through her inheritance of the "disability" of reproduction, became "a being of affections," while man, on account of his "muscular strength" and "active life," became "the master of the two." While some physical "diversity of sex is of very ancient origin," a differentiated "mental sex character" distin-

guishes humankind from the rest of the animal kingdom.⁶² Cope clarified that while impressibility of *tissue* provides the conditions of growth, impressibility of *character* describes emotional excitability, or the tendency to an emotional response above and beyond its stimulating impression. Anglo-Saxons, at the top of the evolutionary ladder, possessed the most highly differentiated physical, mental, and psychological profiles, such that woman's "form" is more unlike that of men. The bodies and minds of civilized women, on account of their being more childlike than men's, retained more plasticity; correspondingly, their hyperimpressibility triggered responses exceeding the stimulating impression.

In short, race scientists assigned the Anglo-Saxon male *sentiment* and consigned his female counterpart to *sentimentality*. They transferred onto women the pejorative connotations of the adjective "sentimental," which according to Janet Todd refers to "the display of emotion for its own sake beyond the stimulus and beyond propriety."⁶³ In its excess, sympathy took the form of "physical vices, superstitions, and selfish ambitions," traits that lead first to the degeneration of an individual and eventually to the downfall of a society.⁶⁴ When Charles Guiteau fatally shot President James A. Garfield in 1881, Cope and Packard wrote two editorials diagnosing the assassin as insane, meaning "the emotional or sentimental elements of character have so far overcome the rational as to cause the commission of self-destructive acts."⁶⁵ Guiteau had become, in other words, overly feminized, as his overindulgence in feeling vitiated his capacity for temporal reflection.

Cope argued that the adult male, matured past the tendency to excess but tempered from cruelty by the "*indirect* influence" of his wife's delicate feelings, enjoys a life of rationality and altruism at the head of the family and the imperial state.⁶⁶ Poised in counterbalance to sympathy, the rational faculty of justice "enable[s] the possessor to dispose of his sentiments in the proper manner," for he enjoys a synchronicity of reason and sentiment.⁶⁷ The harmony of civilization depends on white men's use of women "in the proper manner"; that is, as sentimental helpmates who absorb the volatility and permeability of sensibility. While necessary for racial advance, sympathetic identification functions as an "escape from" the pressures of empire building and only furthers Anglo-Saxon supremacy when it represents "the function of a special class or sex."⁶⁸ Since women's place was far removed from the public sphere, the vigor of the race remained unthreatened by their sentimentality. As the weaker sex, women's stimulation of men's love also ensured their own survival. In fact, Cope argued, a civilization's level of ethical development can be measured by men's treatment of women, for civilized men would reenslave women were it not for their own refined yet tempered feeling.⁶⁹ "There is absolutely no reason why

men should expend their energies on women, excepting as an expression of personal affection,” Cope maintained.⁷⁰ Rather more bluntly, he wrote to his daughter, Julia, who nonetheless served as one of her father’s key interlocutors, that “in fact women have no standing with men excepting through the bonds of affection. Outside of these they ‘don’t count.’”⁷¹ Cope elsewhere clarified that if women were a nation, men would have invaded them long ago.⁷²

The two-bodied subject sticks together through a heterosexual attraction that had been transformed from the instinctive sexuality of animals and savages into the reflective faculties of sentiment and sympathy. “The relations of the opposite sex furnish the inducement to progress,” Cope wrote in his typical convoluted prose, and “the necessity of pleasing and inspiring the opposite sex has a great deal to do with the becoming pleasant and respectable.”⁷³ For Le Conte, “the only natural relation between the sexes is that of being *mated*.”⁷⁴ Cope and Hyatt maintained that civilization itself depends on the reunion of the bigendered body. They recommended that social institutions compel heterosexual behavior and guard against “gender confusion.”⁷⁵ Cope advocated for both higher education for women to increase their attractiveness to men and easy access to divorce if a particular marriage proved unproductive or harmful. For those men possessing exceptional energy, he even proposed “voluntary polygamy” so that their abundant affection would produce even more civilized offspring.⁷⁶ Yet while Cope and his cohort positioned heterosexual attraction as both the method and goal of civilization, Cope can rhetorically assure its function only through two qualifications and a double negative: “Women of *feminine type, with developed intelligence*, have *never failed* of response from the other sex.”⁷⁷ Another essay contends that binary sexual differentiation is found objectionable only “by persons who are themselves not normal types” or “who are forbidden by some sinister destiny from conforming” to heterosexuality.⁷⁸

Above all, the growing campaign for women’s suffrage most threatened to masculinize women. As Hyatt explained, civilized women seemed far too eager and able to “become virified.”⁷⁹ The impressions resulting from women’s electoral participation would stimulate the growth of masculine traits and atrophy feminine characteristics, causing women and the civilized race to slide down the evolutionary time line back to primitivism. Cope warned that women’s political activity catalyzes “the effeminization of men and the masculinization of women,” a condition that finds “counterfeits of both sexes, each a fraud to the other, and both together frauds before the world and the universe!”⁸⁰ Hyatt was forced to admit that such physical transformation—that is, a physical modification resulting from a repeated impression—follows the basic neo-Lamarckian principle of behavior determining bodily form. It is thus “perfectly

natural and not in a common sense degenerative.” Nevertheless, such sexual de-assignment “would not belong to the progressive stages of the evolution of mankind.”⁸¹ Indeed, the very viability of sexually deviant subjects proved to be one of the neo-Lamarckians’ principal pieces of evidence that civilized individuals must stave off gender-inappropriate behaviors that would rapidly erode the psycho-physical differentiation of the sexes. Racial progress depended on the ability of the civilized to maintain a dimorphic body. The highly impressive female half undertakes the emotional labors of civilization and the animalistic labors of the reproductive cycle, while the masculine half enjoys the sentiments of justice, altruism, and self-control uninhibited by many of the difficulties of embodiment. In many ways, for the U.S. neo-Lamarckians, men, rather than women, achieve the sentimental ideal of transcending the encumbrances of embodiment.

Historicizing Sentiment

While sentimentalism continued to represent a viable scientific discourse during the professionalization of U.S. science, the American School’s vitriol toward women and their sentimentality nonetheless suggests the changes underway in scientific practice by the close of the nineteenth century. Cope joined many of his contemporaries in advocating for the professionalization of the sciences through increased funding, the creation of research appointments free from the responsibilities of teaching, the foundation of research centers, legal protection of the availability of “insane, idiotic, or deformed person[s]” for study and public exhibition despite the ethical objections of nonspecialists, and other means.⁸² He was eager for the difficulty he experienced in obtaining funds for full-time research to go the way of the dinosaurs he unearthed. In presenting their arguments to the public, Cope and Packard cast the value of scientific knowledge in the natural theological terms of the affective bond between the researcher and the beauty of the world. “The cultivation of pure science,” they instructed, “has a sentimental as well as an intellectual origin.”⁸³ Public scientific institutions such as natural history museums, Cope wrote to the *New York Times*, were necessary “to supply stimulus for the highest sentiments of our nature . . . to discover the laws that govern so much grandeur, so much force, so much beauty, so much intelligence; to supply us with positive information as to our relations to matter, and of matter to us.”⁸⁴ While he framed public appeals for increased funding for science in Protestant-sentimental terms in the 1880s, by the 1890s Cope praised political critique approached “from a rational, instead of from a sentimental standpoint.”⁸⁵ Cope’s writings in the

1890s increasingly suggest that just as civilized men tempered sentiment with rationality, science had outgrown its sentimental nature and deserved a commensurate professional stature. As such, his work echoes the larger process of scientific professionalization in the last quarter of the nineteenth century, when scientific objectivity and experimentation emerged partly through its differentiation from sentimental practices of knowledge.

The American School of Evolution drew on the epistemology of sentimentalism to promise the ability of Anglo-Saxons the means to discipline their body and thus their evolution. Turning to Lamarck rather than Darwin and elaborating on the sentimental premise that the civilized can mediate their sensibility, they granted well-off Anglo-Saxons command over evolutionary development and cast everyone else as captives of the present tense, without a future and without a past. Cope and his cohort reciprocally linked physiological and psychological feeling such that a body's degree of impressibility indexed its racial status and vice versa. To reconcile the unstable affectivity of the impressive body at the heart of sentimental epistemology, I have argued, scientists of the American School split the civilized body into two. Women suffered from the vulnerability and excess of sentimentality but were allocated increased sympathy to both capitalize on and mediate their extreme impressibility; men enjoyed rationality and altruism on account of the synchronicity of their organic and political development.

Despite frequent caution from historians of science, scholars have long wanted Lamarckism to function as a more progressive evolutionary theory than natural selection because of its wide use by novelists, abolitionists, friends of the Indian, and others to emphasize the mutability, rather than the fixity, of the body.⁸⁶ This celebratory view, however, overlooks the biocultural nature of the nineteenth-century concept of race and as such misconstrues a racialized theory of temporality as an antiracist strategy. Sentimental discourses propose that Anglo-Saxons possess a superior capacity of physical malleability and emotional discipline. Efforts like those of the American School demonstrate in stark terms how both sentimental and nineteenth-century race science frameworks reciprocally link emotional and corporeal development. The promise sentimentalism offered to the middle classes, in other words, was not only a politics premised on the rightness of individual emotion but also an ontology in which such emotions would continually improve their own bodies.

Indeed, the American School's most immediate legacy—as measured by the work of their scientific students—suggests the biopolitical outcome of the sentimental account of desire determining the body's form. Simply put, the work of the American School of Evolution suggests the fluidity between the

sentimental account of bodily impressibility and eugenics movements, which promoters touted as the “self direction of human evolution.”⁸⁷ Laura Briggs has shown that a fear that the delicate nerves of civilized women left them too weak to bear children at the rate their insensate “savage” counterparts did underlay much of the medical discourse on hysteria.⁸⁸ The American School of Evolution suggests that scientists interpreted the impressibility of the civilized to enable better breeding even as women’s susceptibility jeopardized white reproductivity. The School’s emphasis on civilization as a process of subsuming the organic body to conscious will through self-control and sympathy asserted the eugenic imperative of manipulating the individual body to advance the nation’s racial stock. For Cope, the notion of human rights itself entailed “*the right to pursue a course of progressive evolution without obstruction by unnecessary obstacles.*”⁸⁹ Their method was distinct from early-twentieth-century eugenicists, who developed harder notions of heredity in which the sex cells were impervious to impressions. Thus eugenicists sought to prevent the fertility-unfit women and promote the productivity of the civilized. In contrast, Cope and his cohort, guided by the sentimental belief in the individual’s (relative) permeability, advocated social policies such as the deportation of African Americans and restriction of the suffrage to remove harmful stimuli from the tender bodies of the civilized. Despite the difference in approach, these two generations of race scientists shared a common belief that the civilized could, and should, direct the evolution of the national population. In fact, Cope’s protégé and biographer, Henry Fairfield Osborn, the paleontologist and longtime head of the American Museum of Natural History, played a leading role in U.S. eugenics.

Sentimentalism is a particular emotional regime, one that fantasizes about the ability of the civilized members of society to harness their own bodies and their affects in the service of racial progress. Recent feminist theory about disability, new materialism, and affect has begun rethinking the relationship between matter and the human. Critics such as Nancy Tuana, Mel Chen, and Stacy Alaimo point to the biopolitical connotations of fantasies of cultural mastery over the organic body, a staple of Western philosophy ranging from Cartesian thought to social construction theory’s account of how culture in-scribes the passive, inert body and imbues it with meaning. Viewing the work of the American School of Evolution in this light can suggest the role that sentimentalism has played in elaborating the long-standing Western fantasy that the physiological body is a mere prop impressed on by the hands of the civilized.

Notes

- I am happily indebted to many people for their help with this essay, including the editors and reviewers of *American Quarterly*, Shelley Streeby, Ann Fabian, Jamie Pietruska, Andy Urban, L. Chase Smith, Sarah Blackwood, Shari Huhndorf, Lynn Wardley, Carla Freccero, Claire Jean Kim, Mel Chen, Jack Halberstam, Tammy Ho, and Tonglin Lu.
1. E. D. Cope, "Two Perils of the Indo-European," *Open Court* 3.126 (1889): 2052–54 and 3.127 (1889): 2070–71.
 2. The name riffs on the earlier American School of Ethnology.
 3. Joseph Le Conte, "The Factors of Evolution," *Monist* 1.3 (1891): 334. A recent analysis of sentimentalism and evolution in Nathaniel Hawthorne's romance *A Marble Faun*, for example, argues that the novel's use of Lamarckian notions of physical mutability renders the representation antiracist. See Jennifer Mason, *Civilized Creatures: Urban Animals, Sentimental Culture, and American Literature, 1850–1900* (Baltimore, Md.: Johns Hopkins University Press, 2005), 89.
 4. E. D. Cope, "The Oppression of Women," *Open Court* 8.354 (1894): 4104.
 5. E. D. Cope, "The Present Problems of Organic Evolution," *Monist* 5.4 (1895): 572–73; and Cope, "Ethical Evolution," *Open Court* 3.82 (1889): 1525.
 6. Edward D. Cope, "The Energy of Life Evolution, and How It Has Acted," *Popular Science Monthly* 27 (October 1885): 790.
 7. Jessica Riskin points to Denis Diderot's definition of sentiment as "an emotional 'movement' in response to a physical sensation" (Riskin, *Science in the Age of Sensibility: The Sentimental Empiricists of the French Enlightenment* [Chicago: University of Chicago Press, 2002], 1).
 8. Cope, "Ethical Evolution," 1523.
 9. Peter J. Bowler, "Edward Drinker Cope and the Changing Structure of Evolutionary Theory," *Isis* 68.2 (1977): 252.
 10. E. D. Cope, *The Origin of the Fittest: Essays on Evolution* (New York: Appleton, 1886), 235.
 11. Lynn Barber, *The Heyday of Natural History, 1820–1870* (New York: Doubleday, 1980), 28.
 12. Dana D. Nelson, "'No Cold or Empty Heart': Polygenesis, Scientific Professionalization, and the Unfinished Business of Male Sentimentalism," *differences* 11.5 (1999–2000): 29–56; Laura Dassow Walls, "Textbooks and Texts from the Brooks: Inventing Scientific Authority in America," *American Quarterly* 49.1 (1997): 1–25; and Thomas Hallock, "Male Pleasures and the Genders of Eighteenth-Century Botanic Exchange: A Garden Tour," *William and Mary Quarterly* 62 (October 2005): 697–718.
 13. See, for example, Ezra Tawil, *The Making of Racial Sentiment: Slavery and the Birth of the Frontier Romance* (New York: Cambridge University Press, 2006); and Philip J. Kowalski, "Cultural Genetics: Theories of Inheritance and Nineteenth-Century American Literature" (PhD. diss., University of North Carolina, Chapel Hill, 2007).
 14. Thanks to Ann Fabian for helping me make this point.
 15. Quoted in Louis Menand, *The Metaphysical Club: A Story of Ideas in America* (New York: Farrar, Straus and Giroux, 2001), 105; emphasis added.
 16. Stephen Jay Gould, *The Mismeasure of Man* (New York: Norton, 1981), 44.
 17. On late-nineteenth-century scientists who investigated sympathy and emotion, see Caroline F. Levander, "The Science of Sentiment: The Evolution of the Bourgeois Child in Nineteenth-Century American Narrative," *Modern Language Studies* 30.1 (2000): 27–44.
 18. Ann Jessie Van Sant, *Eighteenth-Century Sensibility and the Novel: The Senses in Social Context* (New York: Cambridge University Press, 1993), 1.
 19. Karl M. Figlio, "Theories of Perception and the Physiology of Mind in the Late Eighteenth Century," *History of Science* 12 (1975): 191, 195.
 20. Van Sant, *Eighteenth-Century Sensibility*, 1–4.
 21. Cope, *Origin of the Fittest*, 385.
 22. Riskin, *Science in the Age of Sensibility*, 21, 6, 2, 7.
 23. George W. Stocking Jr., *Race, Culture, and Evolution: Essays in the History of Anthropology* (Chicago: University of Chicago Press, 1982), 265, 263.
 24. Lydia Maria Child, *A Romance of the Republic* (Lexington: University Press of Kentucky, 1997), 434, 433.
 25. On Cope's difficulty in obtaining university support for his research (as opposed to teaching), see Mark Jaffe, *The Gilded Dinosaur: The Fossil War between E. D. Cope and O. C. Marsh and the Rise of American Science* (New York: Crown, 2000).

26. The U.S. Geological Survey, the National Academy of Sciences, the American Philosophical Society, and the Academy of Natural Sciences frequently published Cope's research in their proceedings.
27. Hyatt self-consciously built on Lamarck's work, of which he learned from Agassiz; Cope became aware of Lamarck after he had begun developing his own theories about the effects of the use and disuse of body parts on an organism.
28. Jean-Baptiste Pierre Lamarck, *Zoological Philosophy*, trans. Hugh Elliot (London: Macmillan, 1914), 221, 219.
29. *Ibid.*, 219.
30. *Ibid.*, 222, 336.
31. Neo-Lamarckian approaches to heredity were also extremely popular throughout the rest of the Americas. See, for example, Nancy Leys Stepan, *The Hour of Eugenics: Race, Gender, and Nation in Latin America* (Ithaca, N.Y.: Cornell University Press, 1991).
32. *Ibid.*, 40. The idea that Darwin had not fully accounted for the appearance of variation was a late-nineteenth-century commonplace.
33. E. D. Cope, *The Primary Factors of Organic Evolution* (Chicago: Open Court, 1896), v.
34. Cope, "Present Problems of Organic Evolution," 572.
35. Cope, *Origin of the Fittest*, 229.
36. Cope, "Energy of Life Evolution," 790, 790–91.
37. Edward D. Cope, "Descent of Man," *Modern Science Essayist* 1.7 (1889): 167–68.
38. Cope, "Energy of Life Evolution," 789–800.
39. *Ibid.*, 40.
40. John W. Powell, "The Growth of Sentiency," *Forum* 11 (1891): 167.
41. Cope, *Origin of the Fittest*, 281, 386.
42. Cope, "Two Perils," 2054, 2053, 2054.
43. Laura Briggs, "The Race of Hysteria: 'Overcivilization' and the 'Savage' Woman in Late Nineteenth-Century Obstetrics and Gynecology," *American Quarterly* 52.2 (2000): 260.
44. Cope, "Descent of Man," 169.
45. Cope, "Ethical Evolution," 1523.
46. Joseph Le Conte, "The Theory of Evolution and Social Progress," *Monist* 5.4 (1895): 493. Cope, in contrast, argued that some amount of struggle characterizes evolution even at the highest levels of racial development.
47. Cope, "Ethical Evolution," 1525.
48. Susan Lanzoni, "Sympathy in *Mind* (1876–1900)," *Journal of the History of Ideas* 70.2 (2009): 270, 285.
49. A. S. Packard Jr. and E. D. Cope, "Editors' Table," *American Naturalist* 16.6 (1882): 491.
50. Glenn Hendler, *Public Sentiments: Structures of Feeling in Nineteenth-Century American Literature* (Chapel Hill: University of North Carolina Press, 2001); and Elizabeth Barnes, *States of Sympathy: Seduction and Democracy in the American Novel* (New York: Columbia University Press, 1997), ix.
51. Dana Luciano, *Arranging Grief: Sacred Time and the Body in Nineteenth-Century America* (New York: New York University Press, 2007), 20, 153.
52. E. D. Cope, "On the Hypothesis of Evolution: Physical and Metaphysical," in *Half Hours with Modern Scientists*, ed. Noah Porter (New Haven, Conn.: Chatfield, 1872), 180–87.
53. For an influential reading of the sentimental ideal of female bodilessness, see Marianne Noble, *The Masochistic Pleasures of Sentimental Literature* (Princeton, N.J.: Princeton University Press, 2000).
54. Marsh similarly dedicated himself to thwarting Cope's fossil discoveries through methods both scientific and scandalous. In an episode historians refer to as "The Bone Wars," the former friends competed outrageously for three decades to unearth, classify, and name the highest number of prehistoric creatures.
55. John S. Haller Jr., *Outcasts from Evolution: Scientific Attitudes of Racial Inferiority, 1859–1900* (Urbana: University of Illinois Press, 1971), 201.
56. Peter Bowler, *The Non-Darwinian Revolution: Reinterpreting a Historical Myth* (Baltimore, Md.: Johns Hopkins University Press, 1988).
57. Charles Peirce, "Evolutionary Love," *Monist* 3.1 (1892): 180.
58. See Peter Bowler, *The Eclipse of Darwinism: Anti-Darwinian Evolution Theories in the Decades around 1900* (Baltimore, Md.: Johns Hopkins University Press, 1992).
59. Van Sant, *Eighteenth-Century Sensibility*, 4.

60. Gail Bederman, *Manliness and Civilization: A Cultural History of Gender and Race in the United States, 1880–1917* (Chicago: University of Chicago Press, 1996).
61. E. D. Cope, "What Is the Object of Life?" *Forum* 4.1 (1887): 51.
62. Edward D. Cope, "The Relation of the Sexes to Government," *Popular Science Monthly* 33 (1888): 722, 723, 721.
63. Janet Todd, *Sensibility: An Introduction* (London: Methuen, 1986), 8.
64. E. D. Cope, "The Future of Thought in America," *Monist* 3.1 (1892): 23.
65. A. S. Packard Jr. and E. D. Cope, "Editors' Table," *American Naturalist* 16.1 (1882): 34.
66. Cope, "Oppression of Women," 4104.
67. Cope, *Origin of the Fittest*, 238.
68. Cope, "What Is the Object of Life?" 49.
69. E. D. Cope, "Psychology: Sex in Government," *American Naturalist* 21.4 (1887): 399.
70. Cope, "Oppression of Women," 4104.
71. E. D. Cope to Julia Cope, March 27, 1888, Edward Drinker Cope, Letters (MSS.C67), American Museum of Natural History Archives, New York.
72. Cope, "Oppression of Women," 4104.
73. Cope, "Relation of the Sexes," 724.
74. Joseph Le Conte, "The Relation of Biology and Sociology to the Woman Question," 189?, unpublished manuscript, University of California Archives, Bancroft Library, University of California, Berkeley.
75. Cope, "Two Perils," 2070.
76. E. D. Cope, "The Marriage Problem," *Open Court* 2.65 (1888): 1324.
77. E. D. Cope, "The Applied Metaphysics of Sex," *American Naturalist* 19.8 (1885): 822; emphasis added.
78. Cope, "Psychology," 399, 400.
79. Alpheus Hyatt, "The Influence of Woman in the Evolution of the Human Race," *Natural Science* 11.65 (1897): 91.
80. Cope, "Two Perils," 2070.
81. Hyatt, "Influence of Woman," 90, 91.
82. E. D. Cope and J. S. Kingsley, "Editorials," *American Naturalist* 27.317 (1893): 451.
83. A. S. Packard Jr. and E. D. Cope, "Editors' Table," *American Naturalist* 19.7 (1885): 691.
84. E. D. Cope, letter to the editor, *New York Times*, February 4, 1887, <http://www.proquest.com/>.
85. E. D. Cope, letter to the editor, *Open Court* 4.151 (1890): 2399.
86. More recently, Elizabeth Grosz has argued for the relevance of Darwin's work to feminist theory. For a concise presentation of this argument, see Grosz, "Darwin and Feminism: Preliminary Investigations for a Possible Alliance," in *Material Feminisms*, ed. Stacy Alaimo and Susan Hekman (Bloomington: Indiana University Press, 2008).
87. Quoted in Sharon L. Snyder and David T. Mitchell, *Cultural Locations of Disability* (Chicago: University of Chicago Press, 2006), frontispiece.
88. Briggs, "Race of Hysteria."
89. Edward Drinker Cope, "What Is Republicanism?" *Open Court* 10.453 (1896): 4897; emphasis in the original.

