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INTRODUCTION

The Human Age

I

Human Forms explores a commonplace that has largely escaped critical attention. In the classical era of European realism, circa 1750–1880, novels invoke human nature as their topic and ground, the theme they are uniquely equipped to realize and the scientific basis for their art—at the same time that the human species becomes the subject of a new discourse, natural history, and its logic of an organic transmutation of forms and kinds.¹ Densely entangled with the rise of evolutionary science, from Buffon through Lamarck to Charles Darwin, the “natural history of man” was that science’s critical occasion, its original and ultimate scandal. The major intellectual revolution of the age did not so much lay a foundation for literary innovation, upon which a genre might settle into a repertoire, as provoke a rolling earthquake of speculation and controversy—conditions that favored the loose, capacious, fluctuating forms of nineteenth-century fiction. The novel’s supposed aesthetic disability, its lack of form, now marked its fitness to model the changing form of man. (This book will retain period usage of the universal particular, “man,” for reasons to become explicit later.)

“Before the end of the eighteenth century, man did not exist,” Michel Foucault declares in *The Order of Things*. The waning of metaphysics, and with it “the pre-critical analysis of what man is in his essence,” made way for man’s appearance “as an object of knowledge and as a subject that knows”—the vanishing point of a secular, scientific and historical, natural order.² Calls for a reorganization of knowledge upon the basis of anthropology, issued early in their careers by Johann Gottfried Herder and Immanuel Kant, displaced the Enlightenment science of man—synthetic,

synchronic, universal—for a new discourse, the natural history of man, and beyond it the modern disciplines of the human sciences.³ A double or divided nature, physical life plus an immortal soul, had set humans apart within the premodern (theological) order of nature. Rather than closing that ancient schism, the natural history of man compounded it, with a new set of dyads: nature and history, individual and species, human life and biological life, or life as such. These dyads fractured outward from the new crux intended to separate humans from other creatures. Born into the world “with few or no special instincts,”⁴ in other words lacking a predetermined nature, the human has instead the freedom to find or make its nature in time, through experience. Being as fixed form, “preformation,” gives way to an open, plastic, developmental conception of form as becoming. In man alone does the species as well as the individual have a history, according to late Enlightenment philosophical anthropologists, who translated the old providential plot of human destiny into a civilizational progress toward perfection, charged with the energies of European industrial and geopolitical expansion. A new “epigenetic” biology provided that progress with its internal logic in the hypothesis of a formative principle, the *Bildungstrieb*, driving organic development from simple to more complex (advanced) states.

But once that developmental principle invested all of nature, it subverted the human exception it was meant to save. After 1800, an emergent evolutionist or transformist natural history sank human species being within the general, irregular flux of terrestrial life. All natural forms, including the human, were subject to mutation. Modern revolutions in astronomy and geology vastly extended the scale of natural history, from abysmal pasts before humanity (and the histories of life and of the earth) to inconceivable posthuman futures. Far from being settled and finished, a solution to the questions raised by the Enlightenment’s secularization of knowledge, human nature became—more urgently than ever—a question, a problem, a fault line of philosophical disturbance in the terrain of a supposed “anthropologism” or “anthropologization,”⁵ well before that terrain’s postmodern subsidence.

The novel, the ascendant imaginative form in nineteenth-century Europe, did more than broadcast the anthropological turn of secular knowledge: it helped steer it and—under the license of fiction—it pressed it to its limits. As the history of man broke up among competing disciplinary claims on scientific authority after 1800, the novel took over as its universal discourse, modeling the new developmental conception of human nature as a relation between the history of individual persons (the

traditional subject of the novel) and the history of the species (the contentious subject of the new anthropology). Novels could offer a comprehensive representation of human life—a Human Comedy—in a general writing accessible to all readers, mediated not by specialist knowledge or technical language but by the shared sensibilities that constitute “our common nature.”⁶ Novels became active instruments in the ongoing scientific revolution, advancing its experimental postulates—that human nature may not be one but many, that humans share their nature with other creatures, that humans have no nature, that the human form is variable, fluid, fleeting—as well as developing a technical practice, realism, to defend humanity’s place at the center of nature and at the end of history. Realism mounts its defense even as natural history evicts man from that privileged station: delivering us to a world that is ours, not as an inheritance, but as a colony, a ground we have come late to as invaders and settlers, exterminating or enslaving the prior inhabitants, transforming the physical terrain—reconstituting nature as a byproduct of human wants.

Enlarging the plan of individual *Bildung*, or moral and spiritual formation, to a species-scale project, a formation of humanity or *Bildung der Humanität*, late Enlightenment anthropology opened the philosophical matrix for a new kind of novel. The Romantic Bildungsroman provided not so much an exemplary form for nineteenth-century realism as a pervasive principle, a “conceptual horizon,” to the extent that all modern novels are in some sense novels of development, in which individual progress and the achievement of humanity dialectically produce each other.⁷ The new anthropology supplied a new, and newly gendered, novelistic subject—unformed, malleable, finding himself in time—as well as a new conception of the novel’s alleged formlessness, now legible as a technical equipment—temporal extensiveness, openness to contingency, internal heterogeneity and variability—for the representation of evolutionary becoming. At the same time, the conjunction of individual and species histories opened a discrepancy between the bounded, purposive, progressive order supposed to regulate a particular human life and the potentially interminable, differentiating, entropic drift of life as such—with the latter exerting warping pressure on the former, as instantiated in the aleatory, unfinished career of the prototypical Bildungsroman protagonist, Goethe’s Wilhelm Meister.

That strong variant of the Bildungsroman, Walter Scott’s “classical form of the historical novel,”⁸ proposed an influential solution. Invoking national history as the medium between individual and species histories, it recast the discrepancy as one of temporal scale, across which human nature might be maintained as singular and stable. Insofar as national

history reproduced a universal developmental plan (as in the Scottish Enlightenment historiography of a progress of economic and cultural stages), it could stand in for species history. That mediation, or rather substitution, relied however on the novel's tactical limitation of its *mise en scène* to a proximate or intermediate historical setting, between the familiar present and an exotic, alien deep past, and to a confined regional range: canonically, in Victorian realism's reorientation of Romantic historicism toward the present, English provincial life a generation since. Non-European peoples, concomitantly, dwelt beyond the pale of realism and its amenities, such as history and *Bildung*: stranded in a static or regressive "time of the other."⁹

Later Romantic fiction, responsive to the disruptive surge of transformist natural history, reopened the gap between individual and species history: by a drastic expansion of the historical distance, hence morphological difference, between past and present, and—more consequentially—by a turn from regional or provincial to metropolitan and cosmopolitan settings. The world-city (Constantinople, Paris, London), a total human environment, offered an experimental laboratory for evolutionist speculation, one in which universal history decomposes into a tangle of incommensurable temporal states, variously accelerating, stagnant, or retrograde developmental stages, and divergent evolutionary trajectories. As the cosmopolis ingests its imperial frontiers, the distorting pressures of urban life generate new mutations, new forms and kinds, contingent adaptations, monstrous births. In Dickens's allegorical realism, the mid-century apogee of this urban-transformist aesthetic, man has reconstituted nature into an artificial, evolving, self-organizing system that—transcending its human genesis—recursively reconstitutes "man." Dickens's achievement throws into relief the identification of a mainstream, mimetic rather than allegorical mode of Victorian realism with provincial life, a tranquil enclosure within which "the history of man" (that "mysterious mixture")¹⁰ can appear to remain stable. Its major artist within the English tradition, George Eliot, pitches the realism of provincial life against its limit. "Species consciousness," the moral achievement of the *Bildung der Humanität*, falters before the inhuman expanse of "involuntary, palpitating life,"¹¹ beyond which strange mutations of race and kind and (eventually) organic life itself occur, no longer accessible to human recognition.

Human Forms seeks to recapture the experimental rather than the finished or perfected aesthetic of George Eliot's mature novels—and the experimental energy of the novel across the period generally. Realism reverts to its primal strangeness, a tense grapple of weird science and

wild fiction, not much like the set of pedagogical programs into which some criticism has calmed it. Reading Eliot's practice alongside Dickens's, *Human Forms* makes the case for alternative, rival realisms within the British tradition, as instantiated by its major nineteenth-century novelists—as opposed to reducing both to a unified aesthetic, or flattening one into the other's false or failed shadow. Before turning, in its last two chapters, to Dickens and George Eliot, my argument ranges across developments in the history of man, the life sciences, and the history of the novel in France, Germany, and Scotland: to suggest that the British case was anomalous rather than typical for the modern history of the novel, not least in its assumption of national history as a progressive frame for its plots of development. Germaine de Staël's early challenge to the consolidating norms of the Bildungsroman in *Corinne* (1807), aimed at the gendered alignment of individual (masculine) progress with universal human equivalence, models a history of the novel that breaches not just national boundaries but the ideological adequacy of modern nation-state formation, within which not all humans qualify as human. Staël's philosophical romance opens onto a history of the genre that moves not smoothly along the rails of national history but by lateral, irregular jolts and swerves of attachment, assimilation, and antagonism—rather like processes of biological variation, although according more to the accounts of Jean Baptiste Lamarck and Geoffroy Saint-Hilaire (saltationist, catastrophic, fitfully and irregularly charged with purpose) than Darwin's.¹²

Human Forms does not attempt comprehensive coverage of the interaction between the novel and the sciences of man in the century that stretches from Buffon, Herder, and Goethe to Dickens, Eliot, and Darwin. Its argument comes to bear, instead, on a selective succession of crisis-points. The first two chapters consider the contentious formation of a human natural history in the late Enlightenment and the emergence of new Romantic genres, the Bildungsroman and historical novel, from that philosophical cauldron. Chapter 3 analyzes late Romantic mutations of historical romance that imagine the dissolution of the Enlightenment idea of a universal human nature via the transformist hypotheses of Lamarck and Geoffroy. Dickens's mid-century recourse to a pre-Darwinian evolutionist natural history and his contestation of the anthropomorphic techniques of Victorian realism occupy chapter 4. Chapter 5 addresses the full-on reckoning with the nineteenth-century revolutions in the human and natural sciences and with realism's formal legacies by George Eliot.

Although my argument attends to the history of the evolutionist science of man and the history of the novel, in continental Europe as well as

Great Britain, the aim of *Human Forms* is more critical than historical. Its concern is with human nature as a formal question for the novel rather than as a primarily thematic or ideological one (although of course these cannot be disentangled). Versions of a developmental dialectic—between individual and species life, between inner aspiration and outward reality, between self and society or world—articulate the form of the novel as well as of human nature: a dialectic under persistent threat of the dislocation or collapse of its constituent terms. My scrutiny of the novel's claim on human nature during the expansive movement of thought I am calling the age of evolution aims to upset the normative status still granted to a mimetic version of realism and its techniques in critical discourse on the novel by insisting on their contingent rather than necessary formation, played out in the recurrent debates and doubts about the order of nature and the form of man from Herder and Kant to Darwin. In the works of its most ambitious English practitioner, George Eliot, realism is a sophisticated holding action, the protective reassertion of a formal anthropomorphism in the light of new kinds of knowledge of an inhuman and indeed posthuman world (as Eliot imagines it in a late fable, "Shadows of the Coming Race"). Man bears within himself the germs of other histories, other grammars of being—past, future, speculative, subjunctive—in which (as among these novelists Dickens, perhaps, most darkly intuitively) he and his works, along with nature itself, grow alien and inimical.

The book's chapters unfold a loosely dialectical scheme. The broad topic of chapter 1, "The Form of Man," is resumed in chapter 3, and that of chapter 2, "The Form of the Novel," in chapter 4; chapter 5 considers the attempt to synthesize emergent forms of scientific knowledge with novelistic form across a literary career. Each chapter (while maintaining a combination of wide-angle historical description with close reading of case studies) offers a different register of analysis. The first sketches the foundation and development of the new scientific history of man through the early debates that animated it; the second studies the contested formation of a genre, the Bildungsroman, through the central crux of gender; chapter 3 is a comparative study of two contemporaneous novels, British and French, in light of the controversial resurgence (and politicization) of transformist science circa 1830; chapter 4 examines a single work, *Bleak House*, to connect its evolutionism with its experiments in narrative and lyric form; and chapter 5 considers a single author, George Eliot, who engaged more decisively than any of her contemporaries with the ongoing scientific revolutions of the age. While the first half of *Human Forms* looks at French and German developments in the novel and the history of man,

its argument comes to bear in the last two chapters on the major British novelists of the mid-nineteenth century. A global account of the topic is well beyond the scope of this book (and beyond my expertise); a complementary or competing work might orient its argument, for instance, around the great nineteenth-century French experiments in a systematic scientific project of literary anthropology, by Balzac (briefly touched on in these pages) and then Zola; or track the subject into the new, emerging domains of the novel, establishing different aesthetics and protocols from the British or French traditions, in North America, in Russia, and—critically—across imperial and postcolonial sites of writing into our own time, when at last the adequation of human nature to a European standard loses its grip.

This introduction goes on to review the argument of *Human Forms* in greater detail, sketching some of its critical and historical contexts and implications.

2

Writing in the late 1930s, Georg Lukács aligned the key tenets of European realism with the Romantic idea of history as an “unbroken upward evolution of mankind” founded on “the organic, indissoluble connection between man as a private individual and man as a social being.”¹³ Lukács’s affirmation rings poignantly against what Mark Greif calls “the crisis of man” in the literary institutions of mid-twentieth-century liberal democracy, driven to reassert an indomitable human nature in the face of ruinous totalitarian projects of human reinvention.¹⁴ Cold war polemic on both sides wielded Man as an ideological slogan, “the unperceived and uncontested common ground of Marxism and of Social-Democratic or Christian-Democratic discourse.”¹⁵ Its utopian iterations recalled the discourse of man in its emergent, generative phase: on the one hand, Lukács’s Soviet-humanist echo of the *Bildung der Humanität*, on the other, the recapitulation of the program of the Romantic Bildungsroman in postwar North Atlantic human rights discourse, in tandem with Kant’s vision of the end of history as a worldwide peace-keeping confederation of nation-states:¹⁶ claims on a universal humanity challenged with the decolonizing agenda of the Bandung Conference of Asian and African nations in 1955.

A diagnosis of the modern intellectual regime of “anthropologism” drove the poststructuralist critique of the late 1960s, anticipated by the programmatically antirealist *nouveau roman*. Foucault branded late-born man “a kind of rift in the order of things,” destined to fade from view “as

soon as [our] knowledge has discovered a new form”: already, in 1966, “‘anthropologization’ . . . is disintegrating before our eyes, since we are beginning to recognize and denounce in it, in a critical mode, both a forgetfulness of the opening that made it possible and a stubborn obstacle standing obstinately in the way of an imminent new form of thought.”¹⁷ Two years later, Jacques Derrida called for the arduous rethinking of “an end of man which would not be organized by a dialectics of truth and negativity, an end of man which would not be a teleology in the first person plural.”¹⁸ Arguably, the decisive disassembly of “man” has taken place through recent work in critical race, gender, and sexuality studies, while the *nouveau roman*’s antirealism has proven a dead end, as alternative realisms proliferate in novels written outside as well as within the old European and Atlantic core.¹⁹ Current modes of posthumanist thought are responding to the more obdurately material crisis of the Human Age, renamed the Anthropocene, a new geological epoch marked by the indelible signature of human civilization on world history. Impersonal, unwitting, that signature encodes not our species’ artistic and philosophical achievements but the onset of the fossil-fueled industrial revolution.²⁰ The subjection of the world as geophysical system to human activity, in short, propels current efforts to think beyond and outside the human, in dour admission of the literal, denuding force of that “teleology in the first-person plural.” The “end of man” has given way to an “end of nature,” a crisis too immense (in Amitav Ghosh’s recent polemic) for the representational capacity of “literary fiction” (realism) and its fine calibrations of agency and event.²¹

“One of the striking features of the discourse of man to modern eyes is how unreadable it is, how tedious, how unhelpful,” writes Greif: a discourse that was already “somewhat empty in its own time, even where it was at its best; empty for a reason, or, one could say, meaningful because it was empty.”²² That tedious emptiness—the banality and bombast fogging “man” by the late twentieth century—accounts, no doubt, for the aversion of critical eyes from the novel’s attachment to the category. (Such once certified-fresh titles as *Of Human Bondage* [Somerset Maugham, 1915] and *Man’s Fate* [*La condition humaine*, André Malraux, 1933] now give off a mildewed whiff.) Consequently we lack a sustained consideration of the novel and its avowed subject in the era of that subject’s revolutionary transformation, when—it is this book’s key claim—the novel reorganizes itself as the literary form of the modern scientific conception of a developmental, that is, mutable rather than fixed human nature. We have thriving recent studies of the novel’s interactions with Darwinian (but far less with pre-Darwinian) evolutionism,²³ with themes articulated in Victorian

anthropology and ethnography, the physiology of mental life, and an emergent biopolitics of race and population;²⁴ studies of literature and the science of man in its earlier Enlightenment phase;²⁵ and a fleet of critical approaches—object-oriented ontology, new and speculative materialisms, actor-network theory, thing theory, animal studies—engaged in destabilizing, downgrading, and displacing human agency within and from our assumptions and hermeneutic procedures.

Human Forms descends into the man-shaped hole (a grave?) around which these critical projects arrange themselves, not to revive a critically endangered anthropocentrism but to investigate the vicissitudes of its formation. My argument attends to the discourse of man when it was “at its best,” tracing its upward arc in natural history and the novel, from Buffon and Herder to Darwin, from *Wilhelm Meister’s Apprenticeship* (1795–96) to *Daniel Deronda* (1876)—to read its all too meaningful emptiness, the “white shield” of man’s open, multivalent, metamorphic potential.²⁶ In the major key of early Victorian triumphalism: “He thrives in all climates, and with regard to style of living, can adapt himself to an infinitely greater diversity of circumstances than any other animated creature.”²⁷ “[Man] opposes himself to Nature as one of her own forces, in order to appropriate Nature’s productions in a form adapted to his own wants,” Karl Marx writes in volume 1 of *Capital*: “By thus acting on the external world and changing it, he at the same time changes his own nature.”²⁸ Coming into the world without form, unbound to a special task or function, man takes on all forms and functions, fills the world and consumes it, making his own nature and making nature his own: making it, as we see too clearly now, his own waste product. Emptiness, then, as a (positive) formal principle, rather than a lack of content: since man, unformed, can absorb all contents as he changes and remakes his form, in the heady era (at least) of the West’s seemingly unlimited imperial and industrial expansion. *Human Forms* argues that the cultural instrument fitted to this modern anthropological conception is the novel, the form without form that likewise assimilates all forms: the *literary form* of the human.

3

Early in Mary Shelley’s novel *The Last Man* (1826), Lionel Verney recalls how friendship reclaimed him from a feral state:

I now began to be human. I was admitted within that sacred boundary which divides the intellectual and moral nature of man from that

which characterizes animals. My best feelings were called into play to give fitting responses to the generosity, wisdom, and amenity of my new friend.²⁹

Sympathetic socialization admits him to full membership in his species. “Friendship is the offspring of reason,” the great natural historian, the Comte de Buffon, had written: “thus friendship belongs only to man.”³⁰ Verney’s progress makes for a striking contrast with the repeated failure of friendship that seals the monster’s exile from the sacred boundary of humankind in Shelley’s earlier novel *Frankenstein*. Nor will the monster’s creator, refusing to give him a mate, open an alternative way to species being—since its condition (again according to Buffon) is biological reproduction. In retaliation, the monster inflicts his plight on his creator: exterminating Victor Frankenstein’s friends and family, reducing him to an inhuman solitude. And this will be Lionel Verney’s fate too. By the end of *The Last Man*, he finds his matriculation into humanity mocked by the extinction of his species, and hence, the disappearance of the condition of possibility for being human.

“I now began to be human”: in her novels, Shelley pits the Romantic ethical and pedagogical ideal of *Bildung*, or culture as the means to becoming human, against the ascendant biological conception of species life.³¹ Pressing antinomies of the late Enlightenment natural history of man—human nature as organically given versus human nature as historically formed—to their breaking point, Shelley unsettles the philosophical basis claimed for the novel since its “rise,” its culturally acknowledged consolidation as a genre, in mid-eighteenth-century England. “The provision, then, which we have here made,” Henry Fielding promised his readers at the opening of *Tom Jones* (1749), “is no other than HUMAN NATURE”:

Nor do I fear that my sensible reader, though most luxurious in his taste, will start, cavil, or be offended, because I have named but one article. The tortoise, as the alderman of Bristol, well learned in eating, knows by much experience, besides the delicious calipash and calipee, contains many different kinds of food; nor can the learned reader be ignorant, that in *Human Nature*, though here collected under one general name, is such prodigious variety that a cook will have sooner gone through all the several species of animal and vegetable food in the world than an author will be able to exhaust so extensive a subject.³²

When Fielding had claimed to describe “not Men, but Manners; not an Individual, but a Species” in his earlier novel *Joseph Andrews*, he meant

by “species” a moral and social type rather than a natural-philosophical entity.³³ Now, with the appeal to human nature, Fielding annexes his “new province of writing”³⁴ to the new science designated by David Hume, ten years earlier, as the foundation of secular knowledge:

There is no question of importance, whose decision is not compriz'd in the science of man; and there is none, which can be decided with any certainty, before we become acquainted with that science. In pretending therefore to explain the principles of human nature, we in effect propose a compleat system of the sciences, built on a foundation almost entirely new, and the only one upon which they can stand with any security.³⁵

The novel too, an upstart genre in want of legitimacy, makes its claim on this new foundation. Fielding articulates it as a *formal* claim: to curate a “prodigious variety” of phenomena “under one general name,” to subdue a manifold to a unity.

From the rise of the novel to its Victorian zenith . . . In the opening sentence of *Middlemarch* (1872), George Eliot addresses a reader who “cares much to know the history of man, and how the mysterious mixture behaves under the varying experiments of Time.”³⁶ The science of man has become a history of man, and human nature, so capacious as to contain without loss of definition a global diversity of living forms, has become a contingent and heterogeneous phenomenon that shapeshifts over time. Where Fielding’s contemporary was Hume, George Eliot’s is Charles Darwin, whose work completes the delivery of nature to the determinations of geography and history initiated in the “Buffonian revolution” of the generation following Hume and Fielding.³⁷ Recasting species as fluid effects of biological succession, Buffon’s *Natural History* planted the seeds (Buffon called them “internal moulds” [*moules intérieures*], genetic principles of organic development) of an evolutionary or transformist account of life on earth. Darwin’s *The Descent of Man* (1871)—absorbing into its argument the various branches of the human sciences, from anthropology to aesthetics—accomplishes the full subjection of mankind to the new natural history, which Buffon himself had balked at.

Conceiving of her novels as interventions in scientific discourse, not mere applications of it, George Eliot kept abreast of what she and her circle (George Henry Lewes, Herbert Spencer) called “the Development Hypothesis” across a broad range of European disciplines, from comparative mythology to cell biology, in the age of the so-called second scientific revolution. Eliot’s attunement of *Middlemarch* to “the varying

experiments of Time” announces a strong resumption of the project of the English novel during its emergence in the half-century before *Tom Jones*. The early eighteenth-century novel shared the empirical premises and exploratory mission—to represent the sensible world we inhabit—of the contemporaneous (first) scientific revolution, even as (Tita Chico contends) “early science formulated itself through literary knowledge.”³⁸ But by mid-century, intent on stabilizing its truth claims, scientific discourse pulled away from literary discourse, even as the novel was refining its own techniques and protocols. The signpost of their divergence was a hardening antagonism between verifiable hypothesis and avowed fiction, which masked (according to John Bender) a shared *techne*, the positing of “a provisional reality, an ‘as if,’ that possesses an explanatory power lacking in ordinary experience.”³⁹ Hume and Fielding configure a complementary antithesis: Hume founds the science of man upon a strong affirmation of fictionality, regulated by customary conjunction, as the fabric of empirical reality, while Fielding’s claim on that scientific foundation allows in turn the blithe acknowledgment of his work’s fictional status.⁴⁰ By the time George Eliot is writing, sophisticated accounts of scientific method (by William Whewell, Thomas Henry Huxley, and John Tyndall) insist upon the vital role of the imagination—“a constant invention and activity, a perpetual creating and selecting power”—in the making of new knowledge, while nevertheless worrying over the relation—porous, transitive, reversible—between technical and figurative language, fictive invention and verifiable fact.⁴¹ In that relation, George Eliot finds the opening for her experimental practice. Darwin, relying (as recent commentary has insisted) on fiction-generating devices such as conjecture, analogy, plotting, and personification to mount his “one long argument,” characterizes “the considerable revolution in natural history” it will accomplish as a revolution in language—a simultaneous conversion of metaphors (of kinship and descent) into “plain signification” and of technical terms (taxonomic categories) into “merely artificial combinations, made for convenience.”⁴²

Hypothesis and fiction, scientifically disciplined and imaginatively licentious iterations of “as if,” converged to form the new discourse, the history of man, that took over the science of man in the late eighteenth century. Chapter 1 of *Human Forms* considers this vexed conjunction. Buffon imported a “literary” stylistics of analogy, metaphor, conjecture, and probabilistic reasoning into his scientific argument, while Jean-Jacques Rousseau, following Buffon’s discussion of the human species in the *Natural History*, opened his *Discourse on the Origins of Inequality among Men* by “[setting] aside all the facts”⁴³ for a provocative exercise in

free-ranging speculation on the relation between human nature and history. Scottish philosophers such as Adam Ferguson sought to refute Rousseau by reasserting scientific protocols for analogical reasoning and hedging the role of conjecture in their own work, which would nevertheless be given the generic title “conjectural history.”⁴⁴ Conjectural history became a preeminent literary genre of the late Enlightenment, the medium of the new natural history of man and its subdivisions, “the history of languages, of the arts, of the sciences, of laws, of government, of manners, and of religion.”⁴⁵

The devolution (or disintegration) of hypothesis into invention, science into fiction, would remain a persistent scandal of the history of man and the evolutionist natural history that shadowed it. In a defining controversy, Kant accused Herder of abandoning science and philosophy to produce a work of “mere fiction” in the guise of a “conjectural history” in the latter’s most ambitious of all essays in philosophical anthropology, *Ideas for a Philosophy of the History of Mankind*—the work that, more than any other, implicated human history with an evolutionist natural history at the close of the eighteenth century. Kant’s complaint would generate the methodological distinction, crucial for the completion of his own critical philosophy, between the constitutive “as if” of verifiable hypothesis and the regulative “as if” of teleological judgment; Herder’s fault was to have muddled the two, irresponsibly positing an occult organic force as a causal principle in the evolution of natural forms, from minerals to plants to people. Conjectural history was only a novel with a collective protagonist, Man, instead of an individual one, Tom Jones or Clarissa Harlowe. The reiteration of the charge, and the controversy, throughout the nineteenth century would confirm the conceptually monstrous status of the natural history of man: a grotesque hybrid of science and fiction, mutating between both, settling into neither.

4

As controversy and scandal shake the history of man, so human nature fails to become a settled, singular entity, a scientific fact, and its subject, man, remains (as he was in the old regime of theological knowledge) a “mixture of two realms, the animal and the human.”⁴⁶ Giorgio Agamben argues that an internal “mobile border,” an “intimate caesura,” has always defined the Western philosophical category of man: human nature bears within itself the cleft between “what is human and what is not,” in the suturing together of physical and metaphysical natures, animal body

and immortal spirit.⁴⁷ The “anthropological machine” of Enlightenment knowledge reproduces this chimera as Buffon’s *Homo duplex*, “Man the Double,” a taxonomic reinvention meant to preserve human nature within the wilds of natural history. Man’s physiological constitution might place him among the “brutes,” Buffon allows, but the soul, a divine implant manifest in the uniquely human work of reason, sets him absolutely apart.⁴⁸

Buffon saw that the consignment of man to nature required a redrawing of the boundary of human exceptionalism, all the more urgently now that metaphysical walls were down. Other thinkers, dissatisfied with the resort to a supernatural prosthesis of reason or language, looked elsewhere for a uniquely human principle.⁴⁹ Rousseau proposed the most consequential solution: the “faculty to perfect oneself,” the capacity for progressive development as a species, sets humans apart from other creatures. This developmental capacity is predicated on humans’ freedom from instinctual predetermination or (to use the term from Enlightenment genetic theory) preformation. Lacking strong sensory bonding to a fixed behavioral repertoire, human nature is plastic, mobile, open—free to mold itself, in time and through experience, by observation and imitation. Rousseau’s denial even of a basic social instinct supplied a moral crux for the ensuing debates over the history of man, with the scientific empiricists (the Scottish philosophers, Herder, eventually Darwin himself) insisting on a social foundation for human development—whence the appeal of Shelley’s characters to the humanizing force of sympathy and friendship—and Kant, notably, following Rousseau, although turning in a quite different direction. Man, in Rousseau’s and Kant’s (and, later, Marx’s) radical declension of the new anthropology, has *no given nature* and hence must *make his nature*. Unformed in nature, man achieves form developmentally, in history—a history doubled between the individual life and the life of the species. Here philosophical anthropology generates founding principles for the new kinds of fiction (considered in chapter 2 of *Human Forms*) that will define nineteenth-century practice: the Bildungsroman, which tracks “the harmonious formation of the purely human”⁵⁰ through a character’s sentimental education; and the historical novel, which makes national history the progressive medium that regulates discrepant scales of individual and species life. In both, a developmental narrative shapes the fortunes of a sensitive, susceptible protagonist, a Wilhelm Meister or Waverley—the new human subject given by the new anthropology.

The rise of transformist natural history after 1800 turns this solution back into a problem. Once the principle of development becomes universal, covering all organic beings, the human exception disappears. The

formal qualities supposed by late Enlightenment philosophers to set man apart in nature—plasticity, perfectibility—embed him more deeply within it. Johann Friedrich Blumenbach affirmed the unity of the human species and (following Buffon) the absolute distinction of man from other animals as interdependent principles, each guaranteeing the other.⁵¹ Transformism threatened both, raising twin specters of a polygenetic dispersal of man among biologically distinct kinds (excessive diversity) and an abominable kinship between humans and brutes (excessive unity). While polygenetic racial theory simmered around debates on the abolition of slavery (coming to a toxic boil at mid-century⁵²), the “Orang-Outang Hypothesis” of Rousseau and Lord Monboddo gained scientific strength through the resurgence of interest in Lamarck’s zoological philosophy in the late 1820s. Lamarck’s attribution of species transformation to the inheritance of physical modifications acquired through an organism’s habitual response to environmental conditions would blend with Geoffroy Saint-Hilaire’s argument for the genesis of new species through deformations of embryological development—“monstrosities”—in popular syntheses such as, in Great Britain, Robert Chambers’s *Vestiges of the Natural History of Creation* (1844), which was not only eagerly read by poets and novelists but outsold most contemporary fiction. The “teratology” of Geoffroy and his son Isidore naturalized the monster as the origin of species—a hypothesis accepted by Chambers as well as by his formidable opponent, Richard Owen. We find it organizing the character system as well as narrative procedures of the popular urban-gothic fiction of Victor Hugo and Charles Dickens, in a lingering affront to mimetic-realist canons of novelistic form and character.

Darwin, resolutely monist and materialist in his stricter accounting of evolution by natural selection, banishes monsters (like a modern Saint Patrick) from the order of nature.⁵³ Metamorphosis happens all but imperceptibly on the timescale of human experience, as singular mutations graduate into varieties, and varieties into species, by the slow accumulation of individual differences within a fluid continuum of natural forms. In contrast, the archetypal order of Geoffroy’s natural system necessitated a saltationist mechanism—the birth of monsters, an abrupt leap from given form—for species change.⁵⁴ *The Descent of Man* seeks to close the “ceaseless divisions and caesurae” of which man, according to Agamben, is both the site and the effect.⁵⁵ It resolves the chimerical figure of *Homo duplex* through a biological accounting of all aspects of the human, in which reason, sentiment, morality, taste, and religious belief are subsumed under natural drives and processes anterior to humanity’s

emergence as a species. Reversing Blumenbach's postulate, Darwin makes unity with nature at large the condition of a monogenetic human nature in *The Descent of Man* and its sequel, *The Expression of Emotions in Animals and Men*. We are one species—therefore, because, we share our life with other creatures.

5

That key question, of the unity or multiplicity of the human species, was made urgent by two major historical developments of the late Enlightenment. “Now the Great Map of Mankind is unrolled at once,” Edmund Burke wrote to the philosophical historian William Robertson in 1777: “there is no state or Gradation of barbarism, and no mode of refinement which we have not at the same moment under our View.”⁵⁶ Burke's tribute to Robertson's *History of America* also alludes to the imminent completion of the map of the world's coastlines by the state-sponsored circumnavigations of Louis Antoine de Bougainville, James Cook, and other explorers, culminating in Cook's third voyage, then in progress (1776–1780). The reduction of the earth to a closed cartographical system (trussed for European projects of resource extraction and colonization) accompanied a series of first encounters with a bewildering diversity of hitherto unknown peoples across the South Pacific. Crucially, these late eighteenth-century expeditions were licensed as scientific projects, and (beginning with Bougainville's) they carried professional astronomers, botanists, and geographers with them. First contact with new peoples took place, in other words, within the widening—fracturing—horizon of scientific knowledge. The voyages had an immediate, forceful impact on Enlightenment philosophical discourse, in speculations on universal history and human diversity by Rousseau and Diderot (whose “Supplement to Bougainville's Voyage” is an early experiment in biopolitical conjecture), Robertson, Lord Kames and other Scottish philosophers, Kant (debating the unity of the human species with Georg Forster, who had sailed on Cook's second voyage with his father, the expedition's naturalist), and Herder (defending multiple paths of cultural development within a universal *Bildung der Humanität*). These discussions yielded trenchant critiques of the spread of European empire, as Sankar Muthu has shown, as well as justifications of it.⁵⁷

These discussions were also charged by, as they charged in turn, intensifying debates around the Atlantic slave trade: the second of the major historical developments that shaped the new natural history of man. Both proslavery and antislavery writers “[endeavored] to traverse the porous

boundaries between human and commodity,” in Lynn Festa’s analysis, with the latter party “emphasizing those aspects of the human that are inalienable,” generating an early version of human rights discourse.⁵⁸ Former slaves, writing their autobiographies, authored their own emergence from the condition of property, a thing to be bought and sold, into full humanity; meanwhile, abolitionist writers mobilized sentimental rhetoric to activate sympathetic bonds of universal brotherhood and sisterhood.⁵⁹ Against this, in an ominous escalation, proslavery apologists began to scramble the biological boundary between species, as in Edward Long’s argument (drawing on early evolutionist conjecture) that “[negroes] are a different species of the same genus” as Europeans, and that “the orangutang and some races of black men are very nearly allied,” in his *History of Jamaica* (1774).⁶⁰ For now, however, monogenesis—the doctrine of a unified human nature—remained orthodox, the premise of projects of *Bildung* in the novel as elsewhere.

Even when (or, perhaps, especially when) not making racial difference its theme—it largely went without saying that *Bildung*, like property, was a white male privilege—the novel confronts the formal problematic of human nature as the relation between a uniform framework of kind or species and the degrees of variability it can tolerate. How much difference can man contain before he himself becomes different? So sure is Fielding of a universal human nature that he finds in its “prodigious variety” a source of festive enjoyment: “a cook will have sooner gone through all the several species of animal and vegetable food in the world, than an author will be able to exhaust so extensive a subject.” The analogy looks forward to the anthropological characterizations of Herder, Lamarck, and Chambers: man the imperial animal, world-occupying, world-devouring. That a Caribbean product is being consumed—the turtle, with its “delicious calipash and calipee,” standing in for sugar and the human bodies that produce it—sharpen the analogy’s edge.⁶¹

Fielding’s mock-heroic domestication of the novelist as chef admits him to the experimental vocation of the philosopher and scientist described a year earlier in Hume’s *Enquiry Concerning Human Understanding*, a popular reworking of the *Treatise of Human Nature*:

It is universally acknowledged that there is a great uniformity among the actions of men, in all nations and ages, and that human nature remains still the same, in its principles and operations. The same motives always produce the same actions: The same events follow from the same causes. Ambition, avarice, self-love, vanity, friendship,

generosity, public spirit; these passions, mixed in various degrees, and distributed through society, have been, from the beginning of the world, and still are, the source of all the actions and enterprises, which have ever been observed among mankind. . . . Mankind are so much the same, in all times and places, that history informs us of nothing new or strange in this particular. Its chief use is only to discover the constant and universal principles of human nature, by showing men in all varieties of circumstances and situations, and furnishing us with materials, from which we may form our observations and become acquainted with the regular springs of human action and behaviour. These records of wars, intrigues, factions, and revolutions, are so many collections of experiments, by which the politician or moral philosopher fixes the principles of his science, in the same manner as the physician or natural philosopher becomes acquainted with the nature of plants, minerals, and other external objects, by the experiments which he forms concerning them.⁶²

With these principles (twisted to misanthropic satire by Fielding's *Man of the Hill*⁶³), Hume outlines a practical program for the natural history of man. It would be adopted by his countryman Walter Scott, sixty years hence, as a scientific basis for his own epoch-making experiment in historical fiction: Scott all but cites the *Enquiry* in the introductory chapter to *Waverley*. Opening human life to the prospect of wholesale historical change, Scott seeks to regulate its potentially infinite variability, first, by invoking "the passions common to men in all stages of society,"⁶⁴ and second, by limiting the range of temporal difference to the intermediate past, "sixty years since," the span of individual human life and personal memory. Within this range, "the constant and universal principles of human nature" may hold steady.

Also addressing Hume's program, Jane Austen's narrator in *Northanger Abbey* alludes to a key principle of the conjectural history assumed in *Waverley*, the global contemporaneity of different developmental states of human society:

Charming as were all Mrs. Radcliffe's works, and charming even as were the works of all her imitators, it was not in them perhaps that human nature, at least in the Midland counties of England, was to be looked for. Of the Alps and Pyrenees, with their pine forests and their vices, they might give a faithful delineation; and Italy, Switzerland, and the south of France might be as fruitful in horrors as they were there represented. Catherine dared not doubt beyond her own country, and

even of that, if hard pressed, would have yielded the northern and western extremities. But in the central part of England there was surely some security for the existence even of a wife not beloved, in the laws of the land, and the manners of the age. . . . Among the Alps and Pyrenees, perhaps, there were no mixed characters. There, such as were not as spotless as an angel might have the dispositions of a fiend. But in England it was not so; among the English, she believed, in their hearts and habits, there was a general though unequal mixture of good and bad.⁶⁵

Austen's irony cuts both ways. Of course human nature must be a universal constant—in populating foreign countries with fiends and angels, Gothic romancers expose their own as well as their readers' ignorance of the world. The human nature found at home in England, however, is an entity shaped by "the laws of the land, and the manners of the age," so that "mixed character," its essential ingredient, not only resembles that historically contingent formation, the British constitution, but has coevolved with it—is shaped by it. Hume had described the English as having "the least of a national character, unless this very singularity may pass for such," by which he meant that the English national character expressed England's historical achievement of civil and religious liberty and a mixed constitution.⁶⁶ If human nature amounts to national character, then it might well be different among the Alps and Pyrenees, or even in Wales or Scotland, let alone in generations or centuries past. Meanwhile, with "the Midland counties of England," Austen claims for nineteenth-century British fiction the homeland of realism that *Middlemarch*, supreme achievement in the mode, will call in its subtitle *Provincial Life*: a geographical realization of that cosmic "middle nature" Herder had identified as the habitable zone of the "noble middle creature," man, where human nature can be maintained at the center of its world by a refined literary technology—mixed character, omniscient narration, free indirect speech, and so on. Notoriously, as though fulfilling Austen's prescription, realism gives way to other aesthetic modes, such as melodrama, romance, and Gothic, when the English novel ventures out to the imperial periphery, or even below the middle classes.⁶⁷

Human nature has become a historical discourse and man a historical problem by the time Austen and Scott are writing, in the wake of the French Revolution: a shocking acceleration of historical change made more shocking by claims upon it as a historical event that would *change human nature*. "The crisis in the conception of 'Man,' propelled most notoriously by the French Revolution, coincided with a reconception, perhaps

even an invention, of ‘literature,’” which took the form, writes Maureen McLane, of “a literary anthropology—a conscious conjunction of the literary and the human.”⁶⁸ Major English poets (Wordsworth, Coleridge, Percy Shelley) exalt poetry as a reparative “discourse of the species” that, originating in human nature, may thus restore it: “Poetry models itself as a totality for man, a synthesis of his faculties and powers, a return of human language to the human body.”⁶⁹ McLane turns to *Frankenstein* for its exemplary demonstration of the breakdown of the new synthesis under the stresses it is required to bear. The monster is an impossible subject who makes his eloquent claim upon human reason, human sentiment, and human rights from outside biological generation. Accordingly, and following the slave’s cue, he resorts to the Enlightenment endeavor to make himself human—to make his own nature—through the new technology of *Bildung*, that is, through letters: learning to read, receiving and relating stories. And he almost makes it. . . . When the creature narrates his own history, at the center of the novel, Frankenstein is moved to recognize his humanity—until the spectacular evidence of his obscene genesis, his botched-together body, blocks the turn to sympathetic inclusion:

His words had a strange effect upon me. I compassionated him, and sometimes felt a wish to console him; but when I looked upon him, when I saw the filthy mass that moved and talked, my heart sickened, and my feelings altered to those of horror and hatred.⁷⁰

Aesthetic sensibility, fixed in the visual register, throws up “an insuperable barrier” to “humane assimilation.”⁷¹ Simultaneously burdened with an excess of feeling (diverted into suffering) and an excess of physical life (his grotesque body), the monster can neither be human, the product of culture, nor a species, the product of nature.

Anomalous if not monstrous, like its subject, Shelley’s novel is a singular experiment in British Romantic fiction: singular too in being the only novel featured in McLane’s study, which addresses poetry as the period’s “literary absolute,” the privileged bearer of “the promise of a totality for man.”⁷² Complementing *Romanticism and the Human Sciences* (an early inspiration for this book), *Human Forms* turns to the novel, the new genre that coevolved with the scientific revolution, shared its empiricist protocols, and, as itself a mode of experimental history, set out to compose and shape, not merely reproduce, the natural history of man. Lacking the preformed components (metrical, stylistic, stanzaic) of poetic genres, the novel finds its form in time—in development. The genre’s supposed aesthetic fault, its lack of form, becomes its asset. Fictional prose

narrative—emergent, extensive, open, speculative, combinatory—provides an analogue for the new, epigenetic model of biological development and the human figure it gestates. Where conjectural histories track the development of the race or species through the succession of modes of production and social institutions, novels articulate particular life stories against that collective scale, bringing its determinations home to personal experience, to individual thought and feeling.

In short: the Bildungsroman. The new kind of novel, born in the “novelistic revolution” of European Romanticism, becomes regulative—the “symbolic form of modernity”—to the extent that realist novels are all in some sense novels of development.⁷³ *Frankenstein* staged the calamitous failure of the radical (Rousseauvian, Kantian) version of *Bildung* as man’s artificial remaking of man, in which humanity and species life are torn asunder to leave the wretched subject without either. The normative model of *Bildung*—considered in chapters 2 and 5 of *Human Forms*—appeals to organic growth for a narrative of gradual development through trial and error, divagation and discovery (good experimental practice), rather than by sudden revolutionary reinvention (bad). Its narrative tendency, played out in Goethe’s prototype *Wilhelm Meister’s Apprenticeship*, is toward a potentially endless deferral of the horizon of realization, a substitution of human being with everlasting becoming. The tension is thematic in the two major competing critical accounts of the new form, defining the theory of the novel into our own time, by G. W. F. Hegel and by Friedrich Schlegel: the former deploring the modern novel’s betrayal of an “epic” aesthetic of unity and totality, the latter celebrating a new, “Romantic” aesthetic of perpetual emergence and infinite differentiation.

In a sharpening dialectic, the human is to become universal by becoming individual, shedding the local and contingent shackles of social type. But social integration remains the impassable horizon of the Bildungsroman, entailing (for Franco Moretti, after Hegel and Lukács) the hero’s renunciation of individual autonomy for the “symbolic gratification” that attends “the happy belonging to a harmonious totality.”⁷⁴ The tension between these imperatives is radicalized, early on, in the case of women, whose artificial exclusion from the social paths of *Bildung* enforces an a priori exclusion from full humanity (as advertised in the name of the universal particular, man). Germaine de Staël’s feminist deconstruction of the Bildungsroman in *Corinne* (a project resumed later by George Eliot) presses its critique through a turn to the nation as *Bildung*’s secular horizon, the site of human totality, in a preemptive anticipation of the solution offered in the contemporaneous Irish and Scottish genres of national tale

and historical novel. Binding together individual and national destinies, the national tale's "allegory of union"⁷⁵ charges a marriage plot with the sentimental and libidinal contents of the political union between former nations that constitutes the modern state: legislating, in Staël's scathing gloss, the confinement of women to the infantine half-life of domesticity. The dissenting heroine, exiled from domesticity as well as from *Bildung*, suffers death without biological issue—extinction: to claim, instead, the melancholy sovereignty of memory and imagination, enshrined in the novel that bears her.

The historical novel makes national history the middle term that correlates the history of the individual with the history of the species—a crux opened in philosophical anthropology, and exacerbated in the nineteenth century not only by the confounding event of revolution, splitting history apart, but by sublime extensions of the chronology of earth history beyond human species life. That vastly dilated temporal range affords the new transformism one of its conditions of possibility. If natural history now affords "no vestige of a beginning,—no prospect of an end," in the phrase of geologist James Hutton,⁷⁶ then development—mutation—may likewise have no end, no final station or perfect type. This intimation troubles the later historical novels of Scott and his successors, as they break through the boundary of an intermediate past (sixty years since) to imagine remoter, stranger scenes of human and not-quite-human life. The nation, an only ever temporary bridge between the divergent paths of personal history and natural history, no longer holds.

6

Mary Shelley stages the crisis of the monster's humanity as a crisis of form. He repels sympathetic acceptance because his body appears in others' eyes as a "miserable deformity," a "filthy mass that moved and talked,"⁷⁷ form on the brink of deliquescence into matter—foul, formless, Bataille's *informe*.⁷⁸ The crisis of the human form is an insurmountable aesthetic offense.

Fielding's conceit of the author as cook invokes taste—esthetic judgment—as the faculty that subdues the "prodigious variety" of human nature to a form. *Tom Jones* is an enormous work, comparable in length to the serial novels of Dickens; but where critics would deplore the sprawling shapelessness of those, they praised the beautiful order of Fielding's. "Uniformity amidst variety is justly allowed in all works of invention to be the prime source of beauty, and it is the peculiar excellence of *Tom*

Jones,” wrote Arthur Murphy in 1762.⁷⁹ Modern critics debate whether the form of *Tom Jones* might be regulated by classical ratios of geometric proportion, derived from Vitruvian architectural theory. In an influential article, Frederick W. Hilles proposed that *Tom Jones* was “shaped like a Palladian mansion,” and cited as its “ground plan” John Wood’s design for Prior Park, the country house of Fielding’s patron Ralph Allen.⁸⁰ An English edition of Andrea Palladio’s *Four Books of Architecture*, a byproduct of the vogue for Palladian villas, appeared in successive volumes from 1715, along with its ancient model, Vitruvius’s *De Architectura (Vitruvius Britannicus, also 1715)*. The design of a temple, wrote Vitruvius, should reproduce the proportions of the human body, since those epitomize the harmonious symmetry of the cosmos. Leonardo da Vinci’s great cartoon “Vitruvian Man” (c. 1490) exhibits the classical placement of the human form at the center of the universe, measuring its rational order.

Tempting though it is to detect a human geometry encrypted in *Tom Jones*, it seems unlikely Fielding had Prior Park in mind as a blueprint.⁸¹ Fielding draws the reader’s attention, in any case, to his work’s temporal dimension, tracking the uneven relation between the pace of the narrative (*discours*) and the time of its narration (*récit*) as measured in the length of its successive parts: book 3, “From the time when Tommy Jones arrived at the age of fourteen, till he attained the age of nineteen” (29 pp.); book 4, “Containing the time of a year” (49 pp.); book 5, “Containing a portion of time somewhat longer than half a year” (51 pp.); book 6, “Containing about three weeks” (49 pp.); book 7, “Containing three days” (62 pp.); book 8, “Containing about two days” (75 pp.); books 9 and 10, “Containing twelve hours” (30 pp.); and so on. (The pattern of narrative acceleration is not sustained.) Far from reproducing a geometrical order, perceptible (like a sonnet’s) at the glance of an eye, novelistic form unfolds in time.⁸² Famously, *Tom Jones*’s apparent temporal drift is reined in, in the closing chapters, to an efficient Aristotelian equipage of plot: classical form after all.

The neoclassical aesthetic standard—according to which artistic forms represent ideal ratios of cosmic order—was being displaced, at mid-century, by a sensationalist aesthetics that rooted taste in the common faculties of the human physiology.⁸³ Explicitly rejecting the canons of proportion, Edmund Burke identifies aesthetic effects with “some quality in bodies, acting mechanically upon the human mind by the intervention of the senses.”⁸⁴ Burke’s signature aesthetic category, the sublime, entails the dissolution of form as a spatial property, measured by sight (since its qualities include immensity and obscurity), and the accession, instead, of durational effects of interminability, succession, repetition, interruption,

and intermittence. Burke's treatise looks forward to the escalating scandal of the novel's formlessness in the following century. Critics bewail novels, especially popular novels such as Dickens's, for the indefiniteness of their dimensions and proportions and their excessive internal heterogeneity: they are too long, they are crammed with too many characters, incidents, and settings, they promiscuously mix discourses, registers, and styles—or they lack style altogether. Dispersed across serial installments, generating “mechanical” (automatic) rather than “organic” (purposive) rhythms of interruption, suspense, and repetition, they play to readers' susceptibilities to sensation rather than their capacity for reflection. In a more receptive spirit, the Victorian critical movement that Nicholas Dames calls “physiological novel theory” made “the problem of elongated artistic forms—forms whose length makes continuous, heightened attention impossible and acts of recollection difficult” central to its inquiry. Interested in the “pitch, intensity and duration of readerly attention,” the oscillation between nervous states of tension and relaxation, and the “engrossment” of individual consciousness into a mass reading experience, critics such as E. S. Dallas and G. H. Lewes recognized the long Victorian novel as a sublime genre in the Burkean sense.⁸⁵ This did not mean that Lewes (for instance) allowed Dickens's novels to be works of art. Rather, they were “phenomena of hallucination” that short-circuited human rationality:

The writer presents almost a unique example of a mind of singular force in which, so to speak, sensations never passed into ideas. Dickens sees and feels, but the logic of feeling seems the only logic he can manage. Thought is strangely absent from his works. . . . Compared with that of Fielding or Thackeray, his was merely an *animal* intelligence, i.e., restricted to perceptions.⁸⁶

As though the novelist is himself one of his inhuman creatures. Dickens's twenty-part serials of the mid-century dislocate or abandon altogether the axis of fictional biography with which the Bildungsroman sought to control its “bad infinity.”⁸⁷ Henry James's well-known putdown of serial novels as “large loose baggy monsters [with] queer elements of the accidental and the arbitrary” branded them not with a sublime but with a grotesque aesthetic—the label above all others that would stick to Dickens's works.⁸⁸

Dickens was the foremost English practitioner of a distinctively modern kind of fiction (Richard Maxwell calls it the novel of urban mysteries⁸⁹) condemned by critics for being formally excessive, monstrous itself, and trafficking in monstrous deformations of humanity. Incubated in new industrial-era audience demographics and modes of production, the early

Victorian monster-novel feeds on a mass reading public; its natural habitat is the serial, from penny-dreadful to weekly miscellany and monthly shilling number. This new fiction emerges around 1830, in the turmoil of a second French Revolution and Reform agitation in Britain—the cheering or dismal prospect, depending on one’s politics, of revolution no longer as a historical singularity but as a chronic condition of modern life, rooted in metropolitan experience and the urban crowd. *Frankenstein* returns, in a popular edition revised by the author, in 1831; no longer solitary, it is flanked by novels by Scott (*Count Robert of Paris*) and Victor Hugo (*Notre-Dame de Paris*) that feature weird quasi-human monsters at the center of their labyrinths. Hugo had theorized the grotesque as the aesthetic mode of modern life in the preface to his 1827 drama *Cromwell*: the signature of fractured, hybrid, mutant form, of nature as perpetual metamorphosis, its figureheads are the giant orangutan, Scott’s Sylvan, and the deformed bell-ringer, Hugo’s Quasimodo. Unlike Frankenstein’s monster, man-made unman, they are natural born. The grotesque, mingling horror with pathos, is the emanation of their intimate proximity to—and ambiguous encroachment upon—the human form.

Neither *Count Robert of Paris* nor *Notre-Dame de Paris* (discussed in chapter 3) appeared as serials, although their progeny would, the *romans-feuilletons* of Eugène Sue and G. W. M. Reynolds, and Dickens’s monthly numbers. Both Scott’s and Hugo’s novels attune their grotesque aesthetic to the controversial resurgence of transformism in the late 1820s, in the renewed attention to Lamarck’s “Orang-Outang Hypothesis” and the teratology of Geoffroy and Isidore Saint-Hilaire, broadcast via the high-profile public debate over morphological principles between Geoffroy and Cuvier and inflamed by the association of “radical science” with reformist and revolutionary politics. Not for nothing does transformist speculation find fertile soil in the new forms of urban popular fiction. Dickens’s art, I argue in chapter 4, channels the popular diffusion of evolutionist thought in Great Britain in the decade and a half before the appearance of *On the Origin of Species* via Chambers’s *Vestiges of the Natural History of Creation*. *Bleak House*, the supreme transformist thought experiment in English before Darwin, poses a massive affront to an ascendant aesthetic of novelistic realism predicated on the constitutive centrality of the human form, scale, and perspective in the world. The affront is more powerful for Dickens’s identification of the world with the city: in the total man-made environment, human nature comes undone, speciating into morbid and pathetic fragments rather than sustaining coherent forms of life.

The Dickens World, the world as city, consumes and metabolizes nature. Its dark totality excludes the domain of realism claimed by the “great tradition of the English novel,” a modern critical canon assembled as a bulwark against the demographic ascendancy of a mass reading public serviced by popular fiction. The great English novelists, wrote F. R. Leavis, “are significant in terms of the human awareness they promote; awareness of the possibilities of life.”⁹⁰ We are to look to Jane Austen and George Eliot, not to the allegorical realism of Dickens and Hugo, for a faithful mimesis of human nature, faithful not only in content but in the perfection of techniques (modern innovations such as free indirect discourse as well as classical properties such as unity of plot) that conform “the possibilities of life” to the scale of “human awareness.” Although size matters, it need not be decisive: in *Middlemarch*, Eliot subdues the enormity of Dickensian serial form to the proportions of *Emma* or *Mansfield Park*. Eliot sought to emulate the popular format of Dickens’s fiction but at the same time to dignify it, issuing *Middlemarch* and *Daniel Deronda* in eight books appearing at two-month intervals, statelier than the spate of nineteen monthly pamphlets.⁹¹ Eliot reaffirms provincial life as realism’s world, but critically rather than reactively, in full cognizance of its possibilities and limits, investing it with what Lauren Goodlad calls (after Fredric Jameson) the “Victorian geopolitical aesthetic.” George Eliot, most European of the great Victorian novelists, reckons not only with current scientific and philosophical movements in her work but with the broad modern tradition of the novel—specifically, with those key forms of nineteenth-century realism, the Bildungsroman and the historical novel, which she recombines, as Goodlad argues, to realize “the historical novel of our time.”⁹²

If *Middlemarch* brings the project of English realism to formal completion, *Daniel Deronda* ruptures it. George Eliot’s last novel abandons the temporal and geographical bounds of provincial life for the oceanic flux of contemporary world history and the deep time of racial history. The pressures of that chronotopic abyss warp humanity into strange new forms, along with its representational apparatus—the relations between figure and letter, metaphor and event, allegory and mimesis, that have persistently vexed the discourse of man and that realism sought to stabilize. *Middlemarch*, far from resting content within its domain, vouchsafes an intuition of a reality beyond the realist novel and its conditions, the human form and scale, in the heroine’s late epiphany of “involuntary, palpitating life”—an intuition of the immanence of life as such, a dynamic material process exceeding human consciousness. Exceeding, that is, not

only Dorothea's consciousness of her own being but the "consciousness of species" Ludwig Feuerbach had designated (in a work translated by George Eliot) as the uniquely human faculty: that "consciousness which man has of his own—not finite and limited, but infinite nature."⁹³ Disclosing the far horizon of the topic named in the novel's opening sentence, "the history of man," and hence the far horizon of her fictional project, Eliot invokes the Darwinian conception of life in which, writes Elizabeth Grosz, "the human is one species among many, one destined itself to be overcome, as are all the forms of life on earth."⁹⁴ The great work of English realism folds open to admit—at this culminating moment—a glimpse of its outside.

7

Sinking human in animal life, Darwin brings to theoretical completion the modern displacement of the classical figure of man—the individual human form as universal cynosure and standard—for a distributed, dynamic conception of "life as such." (At the same time, faithful to inductive and empiricist principles, Darwin participates in a contemporary disengagement of life from Romantic vitalism, which recasts it as a *combinatoire* of chemical and physical processes.⁹⁵) Writing in 1860, Herbert Spencer comments on the obsolescence of the traditional figure of the body politic: the human form no longer offers a microcosm of the natural or social order. Instead, "the indefiniteness of form, the discontinuity of the parts, and the universal sensitiveness" are "peculiarities of the social organism . . . to which the inferior classes of animals present approximations."⁹⁶ At the turn of the nineteenth century, Thomas Malthus's *Essay on the Principle of Population* had undone the traditional equivalence "between individual and social organisms by tracing social problems to human vitality itself," Catherine Gallagher argues, as Romantic and early-Victorian intellectuals "relocated the idea of ultimate value from a realm of transcendental spiritual meanings to organic 'Life.'⁹⁷ Before Malthus, Buffon made population a key determinant in "a biological and demographic model for differentiating and evaluating human cultures."⁹⁸ Natural historians as well as political economists recalibrated life to the macroscopic scale of populations, statistical reckonings of historical probability, and a biopolitical regime of value that swamped personal experience and meaning. Conversely, the discovery of a new basis of life in the nucleated cell (by German philosophical anatomists Theodor Schwann and Matthias Schleiden) reconceived individual bodies, including human bodies, as aggregates of microscopic biological entities. By the close of the century,

“life” would swallow the figure of man—along with the dialectic between individual and social life that (according to Lukács) sustained the realist project—to become the scientific principle of the novelist’s art. Henry James described the novel as not just “a personal impression of life” but itself “a living thing, all one and continuous, like every other organism,” and its raw material, “experience,” as “an immense sensibility, a kind of huge spider-web, of the finest silken threads, suspended in the chamber of consciousness and catching every air-borne particle in its tissue.”⁹⁹ Monstrosity returns, dandiacally bedecked, in James’s declension of Eliot’s “involuntary, palpitating life.”

Human Forms pauses with the consummation of realism (followed by its exemplary breach) in Eliot’s late fiction and with Darwin’s resolution (unfinished, still contentious) of the natural history of man. After Darwin, the game changes. Scientific racism and other biological determinisms, tributary until the last third of the century, flood the cultural field. New discourses, psychoanalytic and sexological, reopen human nature even as those surge in to close it down.¹⁰⁰ Emile Zola’s naturalist manifesto “The Experimental Novel,” published in the year of Eliot’s death, is symptomatic in its literal-minded appeal to scientific methodology (citing Claude Bernard’s *Introduction to the Study of Experimental Medicine*) and to scientific themes, such as the interaction of heredity and environment, for determining the novelist’s art. A decisive philosophical step beyond Darwin, according to Grosz, is taken by Henri Bergson: “If Darwin demonstrates man’s immersion in and emergence from animal (and ultimately plant) life (or even life before plants and animals separated),” Bergson “demonstrates man’s immersion in and emergence from the inhuman, the inorganic, or the nonliving.”¹⁰¹ And also, by implication, his reimmersion and dissolution: a step George Eliot foresaw in her eerie late essay in speculative fiction, “Shadows of the Coming Race,” which imagines the supersession of human and indeed organic life on earth by the evolution of intelligent machines.

“A new humanities becomes possible,” Grosz suggests, “once the human is placed in its properly inhuman context . . . within the animal, within nature, and within a space and time that man does not regulate, understand, or control.”¹⁰² Her proposal echoes other philosophers of science:

The essential function of science is to devalorize the qualities of objects that comprise the milieu proper to man; science presents itself as the general theory of a real, that is to say, inhuman milieu. . . . In all rigor, the qualification *real* can be applied only to the absolute universe, the

universal milieu of elements and movements disclosed by science. Its recognition as real is necessarily accompanied by the disqualification, as illusions or vital errors, of all subjectively centered proper milieus, including that of man.¹⁰³

Georges Canguilhem's appeal to science as discourse of the real by virtue of its access to the "inhuman milieu" of an "absolute universe" is amplified by Quentin Meillassoux and Ray Brassier in their critique of the anthropocentric doctrine (decisively installed by Kant) of "correlationism," which maintains "we only have access to the correlation between thinking and being, and never to either term considered apart from the other."¹⁰⁴ Reality, according to correlationism, can only ever be given to human cognition as the effect of a reciprocal relation between thought and world: a tenet that finds its literary form in nineteenth-century realism's correlations of human spatial and temporal scales and, via free indirect discourse, of world and subject. But the mathematical techniques of natural science—radiometric dating, spectrographic analysis, and so on—yield knowledge of a reality outside the "horizon of correlation": a history of the earth, and of the universe, "anterior to the emergence of thought and even of life," and thus "*anterior to every form of human relation to the world.*"¹⁰⁵ To this Brassier adds the necessary condition of "posteriority," constituted by the eventual extinction of all life on earth, solar death, and the collapse of space-time: a cascade of catastrophes that more decisively "*disarticulates the correlation,*" since it establishes extinction as a transcendental condition: "Terrestrial history occurs between the simultaneous strophes of a death which is at once earlier than the birth of the first unicellular organism, and later than the extinction of the last multicellular animal."¹⁰⁶

Whether or not we go along with these critiques (with their rumble of *après nous le déluge*), we may read the historical opening of a deep time of inhuman anteriority (Meillassoux's "ancestrality") in our period in a series of natural historical writings, from Buffon's *Epochs of Nature* (1778) through Charles Lyell's *Principles of Geology* (1830–33) to *On the Origin of Species*.¹⁰⁷ It is Darwin who poses the decisive challenge to correlationism, Julián Jiménez Heffernan argues in a recent essay, by virtue of his insistence on extinction as a key determinant in the history of life. Darwin's theory infers not only a biological deep past before human emergence but an all-but-infinite futurity beyond it, shadowed by the prospect not only of transmutation (whether progressive or degenerative) but of extinction: a shadow that falls, in Heffernan's provocative reading, across the racial theme of *Daniel Deronda*.¹⁰⁸ Deep time, extending before

and after human life, makes up the conceptual outside—the impassable limit—of the history of man. Its eruption into scientific knowledge coincides historically with the onset of humanity’s takeover of the history of the earth, with what we now call the Anthropocene. Human beings, wrote Karl Marx in 1845, “begin to distinguish themselves from animals as soon as they begin to *produce* their means of subsistence,” by that “indirectly producing their actual material life”—remaking nature, in other words, as a human product.¹⁰⁹ By the mid-1840s, according to recent commentary, the industrial—imminently global—scale of that remaking was becoming evident.¹¹⁰ Both prospects, of an inhuman earth history and of a human conquest of earth history, constitute too the outside of the nineteenth-century novel, the horizon against which novels strive to think their reality. If George Eliot’s involuntary, palpitating life signals a biological continuum beyond realism’s human precinct, the opening of *Bleak House*—with its visionary conceits of a megalosaurus on Holborn Hill and urban soot as snowflakes mourning the death of the sun—overcasts Victorian London, that total human environment, with a more drastic intimation of the before and after of the conditions for life, all life. “Far from lying in wait in for us in the far distant future, on the other side of the terrestrial horizon, the solar catastrophe needs to be grasped as something that has already happened,” writes Brassier, trading Dickensian whimsy for existential portentousness and citing Jean-François Lyotard: “*Everything is dead already.*”¹¹¹ This is the aspect of the Dickens World that John Ruskin, also writing from the imperial capital, saw clearly, and detested:

The thoroughly trained Londoner can enjoy no other excitement than that to which he has been accustomed, but asks for *that* in continually more ardent or more virulent concentration; and the ultimate power of fiction to entertain him is by varying to his fancy the modes, and defining for his dulness the horrors, of Death.¹¹²

Involuntary, palpitating life, transcendental death: the ends of man . . .

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