Primitive Minds

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INTRODUCTION

EVOLUTION AND THE DREAMY MIND

> Ancient traditions, tested by severe processes of modern investigation, commonly enough fade away into mere dreams: but it is singular how often the dream turns out to have been a half-waking one, presaging a reality. Ovid foreshadowed the discoveries of the geologist: the Atlantis was an imagination, but Columbus found a western world: and though the quaint forms of Centaurs and Satyrs have an existence only in the realms of art, creatures approaching man more nearly than they in essential structure, and yet as thoroughly brutal as the goat's or horse's half of the mythical compound, are now not only known, but notorious.
>
> —Thomas Henry Huxley, *Evidence as to Man's Place in Nature* 9

It is curious that Thomas Huxley begins his essay "On the Natural History of Man-like Apes" (1863) with a reference to the prophetic content of waking dreams. Dream, prophecy, and artistic imagination are, on the face of it, anathema to the rigor of nascent professional science that Huxley represents in mid-nineteenth-century Britain. Creation stories and magical teleologies are precisely what the theory of natural selection ejects from natural history, and Huxley had defended the theory on Darwin's behalf in 1860. Yet in this rather surprising passage, Huxley rhetorically folds the history of science into the projections of dreamy or mystical vision. In his

description, the "mere dreams" of religion and art that should vanish under the pressure of Darwinian evolution are not discarded as the detritus of a premodern past but instead mutate into prophetic intuition. The "half-waking" state in which prevision occurs reveals a primordial power of awareness whose discoveries empirical knowledge will subsequently confirm.

Huxley links evolutionary science with the stuff of dream as a preface to his record of travelers' descriptions of chimpanzees, gibbons, and orangutans. In other nineteenth-century British applications of evolutionary theory, however, dreamy visions become a central object of medical investigation or, alternatively, a vehicle of explanation that may compete or even converge with scientific inquiry. For Victorian psychology, the dreamy mind offered a rich source of information about the history and nature of unconscious mental processes, nervous organization and the brain, and about human intellectual development. In imaginative literature, the physiology of dreamy states—including the study of those nervous arrangements that produce clairvoyance, expanded reminiscence, double-consciousness, or simply a brief shift of awareness such as déjà vu—influences character and events often as powerfully as conscious motives or uncontrollable passions do. In realist fiction especially, a character's or narrator's dreamy awareness often provides insight into human nature, social bonds, and heredity, intuiting connections that careful, clinical observation and documentation cannot capture, or at least not as quickly.

Primitive Minds explores how dreamy, usually spiritual, experience intersects with the findings of evolutionary science in the Victorian realist novel—a form that rose largely as an expression of secular culture and scientific method.[1] In combination with its patient accumulation of observable facts about the physical and social worlds it describes, the novel also rests its claim to modernity on the creation of a narrative first-person or omniscient, centered consciousness, whose finely tuned responses to environment and broad observational talents make it a suitable instrument for delivering such facts to the reader. This conception of literary responsibility to the evidence of the senses, to the depiction of contemporary events, and to concrete social experience is very remote from Sir Philip Sidney's idea of the poet as one who converts the brazen world of reality into a delightful, golden imitation of it. Yet it involves a conversion process nonetheless. In its endeavor to depict "things as they are," realist narrative consciousness transforms what N. Katherine Hayles calls "the inherently unknowable and unreachable flux" of a reality "out there" into the constructed concepts that constitute our human world.[2] However limited its direct communication of the real, this narrative

awareness can, in György Lukács's formulation, open a "multitude of doors" or perspectives that together bridge the gap between individual experience and the otherwise invisible social totality.[3] This transformative dimension of realism reminds us that its narrative mode does not claim to be transparent. Rather, realism selects among substantial objects and then demands we make sense of such objects and their relation to one another.[4] *Primitive Minds* asks what happens when the world-organizing narrative mind within the realist text malfunctions, even slightly.

If realism negotiates between mind work and facts in the world, then, as Jason Tougaw argues, it has clear affinities with mental science. In the form of the case study, he shows, subjective human story converges with the objective medical diagnosis, to produce an interpretation of experience that comes at once from inside and outside the mind.[5] The discerning mind must itself be scrutinized for aberrancies and distortions of the world it tries to reveal. This introduces a medical component to the phenomenon of self-abnegation that George Levine recognizes in realism. Realist novels, in Levine's account, insist upon the annihilation of self in the interests of producing objective knowledge. At the same time, this self-erasure leaves an ethical residue in the form of a constraint upon the very situatedness that it recognizes and resists.[6] Levine posits an abstract, self-conscious, once-removed mind, remote from the nervous tissue that houses it.

However, the artful fluctuations between situated perspective and objective knowledge that underpin realist representation in Levine's analysis may be destabilized through the flesh-and-blood environment of the body. Under certain nervous conditions, boundaries between self and world risk dissolving as either the immediate surroundings become enormously remote from mental experience and surrender to its dreamy creations or else as the mind feels itself merging with a world whose dimensions and details may become fantastic. These usually mystical experiences are not simply objectified by the force of rational, diagnostic voices in the text, for they involve forms of awareness operating beneath either the threshold of the unified self or reasoning thought.[7] While they are so anchored in the body that they indicate pathological mental events or at least temporary cerebral malfunction, these experiences nevertheless expand awareness beyond the reach of ordinary sense perception, linking events and images across space and time or seeing into the minds of others. Nineteenth-century physiological psychology frequently identifies events that compromise the highest operations of the human mind in this way with an evolutionarily lower state. Endeavoring to combine the visionary potential of the mind with scientific knowledge

about it, realist narrative fiction exploits the capacious dimensions of dreamy awareness while preserving allegiance to the new discoveries about human nature made by evolutionist mental science.

By focusing on a form that foregrounds the mediation of knowledge by the mind and its aberrancies, *Primitive Minds* thus continues the scholarly investigation of the epistemological unit of the fact that Mary Poovey calls for in *The History of the Modern Fact*.[8] Victorian realist novels remind us that the counterpart of the modern fact is what Thomas Nagel christened the "view from nowhere," in which subjective awareness is modified by general concepts that enable a more objective grasp of our universe.[9] As Lorraine Daston has shown, a-perspectival objectivity entered the natural sciences by way of eighteenth-century moral philosophy, in which the figure of the "man in general" or Adam Smith's "impartial spectator" modeled an ideal observer, detached from his own natural self-interest.[10] The impartial spectator also becomes the guarantor of narrative truth in realist fiction: the moment-by-moment flow of experience recorded by eighteenth-century epistolary heroines, or the flux of feeling that guides the sentimental raconteur, surrenders to the larger view of detached, omniscient narrators and the confident authority of free indirect discourse. That spectator is also implied in the challenge to individual perspective: the element of suspense in realist novels encourages a "skeptical pause" in which readers examine the beliefs that lie behind their expectations, as Caroline Levine has argued; or, as Elizabeth Deeds Ermath has shown, they allow multiple perspectives to converge, abstracting or rationalizing consciousness and creating spatial and temporal continuity among those viewpoints.[11] Yet these suspensions of individual interest or perspective do not preclude a different kind of self-loss, in which interior landscapes overwhelm or merge with external objects. Such events are rehearsed in narrative fiction as spiritualizations of objective fact—disturbances in perception like the intrusion of past, future, or physically remote events or personalities onto present and immediate circumstances. Spectral intrusions of this kind onto the social and natural landscape do not so much undo these facts about the world as explore their unexpected and tremulous dimensions.

Nineteenth-century medical investigations of dreamy or altered consciousness embrace everyday changes in conscious awareness as well as more radical distortions of perspective associated with changes in nervous organization. These studies, framed by evolutionist accounts of mental development, document experiences of heightened awareness, of the mind fusing with a greater universe, of direct communication with God, or simply of the uncanny or inexplicably familiar, endeavoring to link such episodes with

specific, retrogressive events in the brain and nervous system. Correspondingly, in realist novels of the period, narrative distortions of the mind-world relationship point to the influence of these new investigations of the physical basis of mind. In the novels, however, such distortions also unlock perceptions of the "real" beyond the lens of ordinary human consciousness, disturbing the perceived arrangement of objects and events in space and time. In this respect, they disturb the "cultivated detachment" that Amanda Anderson sees as an ambivalent ideal in the Victorian novel, not so much by emphasizing situatedness or organicism, as in their attention to the involuntary or reflex activity that produces an excessively subjective or dreamy experience of the world.[12] The dreamy mind opens a space in the realist narrative fabric for the supernatural, that is, for apparitions, clairvoyance, prevision, and ecstatic communication with the dead or the divine. These spiritual episodes are not merely objects of scientific curiosity in the novels, for they form the very perceptual basis by which these narratives are able to discern significant connections among characters, objects, and everyday human events.

This is the place to explain that by "dreamy," I do not mean the state associated with ordinary night sleep. Although Victorian neurologists and psychologists sometimes commented on night dreaming alongside other forms of reduced consciousness, the "dreamy state," a term coined by the neurologist John Hughlings Jackson to describe the intellectual symptoms of epileptic and postepileptic episodes, refers to exotic phenomena produced in nervous disintegration that range from the expanded reminiscence of déjà vu to double consciousness, the sense of a former life, or even ghost sightings. Victorian psychologists increasingly identified abnormal nervous arrangements at the origin of unusual mental events and spiritual experiences, including artificial and spontaneous hypnotism, telepathy, and second sight; the suspended animation of cataleptic states; and spiritualist phenomena. They recognized these mental wonders both as mundane physiological events and as evidence of the mind's extraordinary recessed powers. Scrutinized scientifically, these strange and often marvelous psychical productions could be exposed as nervous epiphenomena and yet, on the other hand, highlight the unfathomable gifts of the mind, thereby reintroducing spiritual questions to empirical investigation.[13]

Although I assign the term "dreamy" to describe this range of spiritual experiences, the title of this book, *Primitive Minds,* evokes the evolutionary dimension to Victorian studies of mind. "Primitive," in this context does not necessarily refer to non-European cultures or to supposed biological differences among "races," although these meanings did also belong to texts using racial science and criminal anthropology such as those I discuss in chapters

1 and 4. Principally, it suggests both an earlier stage in the history of species (whereby certain neuro-pathological conditions resemble the nervous arrangements of other animals) and a developmentally lower level of organization in the individual nervous system to which a complex organism might, often temporarily, return. Understanding nervous disorders in evolutionary terms also meant focusing on the interaction between mind and environment, again both to understand what shapes the deep history of the species and to trace the degree to which mental events respond to and represent external realities—itself a factor in individual development. As episodes of "nervous dissolution," dreamy states represent "lower" forms of mind. Yet, for some investigators of mesmerism and spiritualism, they also offered therapeutic potential or suggested the future reach of the human mind beyond its narrow dependence on ordinary sense perception.

In his 1874 presidential address to the British Association for the Advancement of Science, John Tyndall represented the thirst for scientific knowledge as a symptom of the "unquenchable claims of [man's] moral and emotional nature."[14] Elsewhere, he described the religious opponents of evolutionary science as "squatters" in the territory of true investigation.[15] In the 1874 address, however, he struck a different tone, suggesting that the pursuit of knowledge seeks fulfillment as much through Shakespeare or Carlyle as through Newton or Darwin and as much in open-minded theology as in science itself: all intelligent human beings struggle for the "bettering of man's estate."[16] Proposing that the pursuit of moral and spiritual truths complements science, Tyndall traces both forms of inquiry to the "yearnings" of human thought, as it strives for the satisfying conceptions that it can never quite fix or attain.[17] These longings belong to both physical and moral dimensions of human nature; they suggest that scientific investigation may be stimulated by open, nondogmatic, and yet spiritually guided modes of analysis. It may even be faith-driven questions that demand to know how mere molecular relationships can produce the marvelously diverse and complex phenomena of consciousness.[18]

Emphasizing exchanges among science, theology, and literature as a force of inquiry, Tyndall not only recruits faith and literary imagination into the service of advancing science; he also locates such inquiry in the intellectual progress of the human species. Prompted by spiritually driven and lettered exploration of the moral and emotional states that produce human action, science promises to elevate the human intellect and "raise life to a higher level."[19] Just as "the promise and the potency of all terres-

trial life"[20] can be traced to matter, human intellect has emerged out of the lower states of feeling and narrow constraints of superstition, unfolding into the freedom of scientific thought. Here, he echoes Huxley's observation in "On the Relations of Man to the Lower Animals" that "the mental progress of the race" can be followed through discoveries illuminating the physical history humans share with other living creatures.[21] Moreover, Tyndall and Huxley both second Darwin's praise in *The Descent of Man* (1871) for the naturalist who can recognize the marvels of natural selection and other forces of heredity that have produced modern intellectual and moral man.[22] For Darwin, examining the moral sense from the perspective of natural history means seeing how human social virtues and the moral acuity that supports them developed: Social organization led to the development of a moral sense while sympathy encouraged the growth of the mental faculties through reflection.[23] Tyndall concurs with Darwin and Huxley that evolutionary science not only discovers the histories of human mental development; it also, along with moral and spiritual growth, provides evidence of such development.

Yet there are numerous Victorian literary accounts of spiritual experience that suggest not species progress but rather the evisceration of the very entities—self, other, space, and time—around which our perception of reality is organized and whose existence is evidence of the complex achievements of consciousness. Alfred Tennyson, who suffered from epileptic seizures, described a state in which "individuality . . . seemed to dissolve and fade away into boundless being."[24] The psychologist and asylum physician James Crichton-Brown identified other accounts of nonpathological and near-universal dreamy phenomena by, especially, Victorian literati: Walter Scott, he notes, describes in *Guy Mannering* the "mysterious, ill-defined consciousness" that constitutes déjà vu;[25] Oliver Wendell Holmes reports accounts of a "conviction [that] flashes through us" of having experienced a precise set of circumstances before, which in some cases produces a feeling of being "like a ghost";[26] and in *A Pair of Blue Eyes,* Thomas Hardy recognizes "those strange sensations we sometimes have, that our life for the moment exists in duplicate, that we have lived through that moment before or shall again."[27] The struggle to find words for sensations that are mysterious, strange, or simply "like" something else more easily described also troubles John Addington Symonds, who is barely able to express the feeling of self-loss that accompanied his sudden trancelike moods:

> Irresistibly [they] took possession of my mind and will, lasted what seemed like an eternity and disappeared in a series of rapid sensations which resem-

> bled the awakening from anaesthetic influence. One reason why I disliked this kind of trance was that I could not describe it to myself. I cannot even now find words to render it intelligible, though it is probable that many readers of these pages will recognize the state in question. It consisted of a gradual but swiftly progressive obliteration of space, time, sensation and the multitudinous factors of experience which seemed to qualify what we are pleased to call ourself.[28]

The spiritual significance attached to this kind of experience varies enormously. Tennyson's seizures enabled an ecstatic appreciation of the "true life," while Symonds's trances elicit an "awful . . . initiation into the mysteries of skepticism."[29] Yet like Scott's account of illusory reminiscence or Hardy's double consciousness, they represent an altered experience in which awareness is no longer anchored in a bounded self. Such self-loss, or the sense of self dissolving into some greater entity or force, is inevitably charged with transcendental feeling.

Recent investigations of the neural substrate of religiosity have observed the heritability of powerful religious temperament.[30] Other studies have sought to identify specific mechanisms in the brain that trigger what we broadly describe as spiritual experiences: awareness of the presence of God, attaching deep significance to events and objects, magical ideation, a sense of timelessness or distorted space, religious ecstasy, depersonalization, or derealization. Temperolimbic instability or atrophy, associated with epilepsy, explains these unusual or hyperreligious experiences.[31] In the 1940s and 1950s, the neurologist Wilder Penfield was able to artificially stimulate dreamy episodes in epileptic patients, by stimulating areas in the brain that are now recognized to be associated with such states: the lateral temporal neocortex, the anterior hippocampus, and the amygdala. These episodes were characterized by altered relationships to the environment that carried religious significance.[32] V. S. Ramachandran points out that the discovering the existence of a "God module" in the brain, of a tendency to belief that can be investigated experimentally, has no bearing on the question of whether God actually exists.[33] Nevertheless, investigations of the neural circuitry behind spiritual experience discover God in the brain with as much anatomical precision as Descartes located the rational soul in the pineal gland.

The following chapters explore both neuropsychological and literary representations of dreamy disturbances of consciousness in the Victorian period that offer an evolutionist, physical explanation of spiritual experience. Yet by concentrating on the spiritual dimensions of the "neuro-narrative," I show

how the novels resist easy distinctions between evolutionary-materialist and spiritual explanations for the human mind and its relationship to the world it mediates. I examine both scientific and literary texts that recognize in spirituality and its cognate emotional and mental states neither the outcome of nor the trigger for greater intellectual accomplishment but rather a more rudimentary stage of mental development, while the higher faculties such as reason and will are suspended. Borrowing William James's distinction between the "dull habit" of learned or "secondhand" religious life and the "acute fever" of original religious experience, I focus on British medical and literary representations of clairvoyance, prevision, spirit communication, or ecstatic communion with a divine being and their expression in the physiological states of hypochondriasis, epilepsy, catalepsy, hypnotic trance, and reverie which temporarily suspends the brain's higher, conscious activity.[34] The marvelous events associated with dreamy mental states pointed to the nervous pathologies of lower nervous arrangements, but they also revealed latent mental powers as forgotten elements of the physical history of the species.

Marilynne Robinson has recently stressed how the culture of scientific positivism dismisses subjective experience as an illusion that must be reduced to the physical or psychological coordinates that produced it.[35] This project of explaining the self in objective terms, she objects, originates in modernity's polemic against religion. Nineteenth-century medical science, which oversees the emergence of what we consider "respectable" fields like neurology, as well as of so-called pseudo-sciences like phrenology, was a major historical player in the process of physicalizing and demystifying inwardness, because it did much to identify mystical and religious experience as the product of faulty cerebral organization and nervous disorder. Yet in the process of accounting objectively for spiritualized subjective states and the neurally triggered disintegrations of self that underlie them, Victorian investigations of the mind also recognized the rich meanings and considerable human potential that such disorders could engender.

Foregrounding pathological forms of dreaminess, the novels I discuss here all recognize nervous malfunction as simultaneously a sign of organismic retreat to a more primitive mental state and as the occasion for transcending everyday forms of perception. While it sometimes enacts the transcendence of detached omniscience, an otherworldly narrative vision may also be as profoundly embodied as the impassioned narrative voice of sentimental fiction. Whether first-person or "impartial" third-person narrators, these voices often mimic the symptoms of the nervous characters they represent, generating spectral figures, drifting into reverie, falling into trance states that infuse

ordinary surroundings with spiritual significance or that freeze the mind's engagement with the external world. Both the disordered and at least temporarily primitive nervous states that these voices represent and the spiritual experiences that they communicate are, I propose, integral to the capacious vision of Victorian narrative realism. In this way, the novel performs what James faults medical materialism for ignoring, namely, the preservation of "spiritual authority" and "judgment" irrespective of the "organic causation" that lies behind it.[36]

By "spiritual" events, I mean those states investigated by medical scientists that range from ecstatic communion with a divine being, to occult communication with the dead and exotic mental phenomena such as clairvoyance, expanded reminiscence, double-consciousness, cataleptic trance, or even simply a brief shift of awareness that seems to invoke another reality. This is, I admit, a somewhat elongated definition. "Spiritualism," strictly speaking, refers to the popular belief beginning (in Britain) in the 1850s in a parallel world of the dead and the capacity of certain sensitive individuals to communicate with it. Victorian reports of rapping, table-turning, levitation, automatic writing, the release of ectoplasm as the spirits took material form were the subjects of wide skepticism as well as a source of conversion, even among scientific figures like Alfred Russell Wallace (who was a prominent advocate of spiritualism as well as Darwin's rival in the discovery of natural selection). Spiritualism was associated with notorious figures, such as the medium Daniel Home, who was said to be able to handle red-hot coals during séance sessions and achieve full-body levitation while in a trance state. Or Florence Cook, who was supposed to have conjured up full form materializations in the form of her spirit contact Katie King. Such phenomena were sometimes exposed as fraudulent, but they also generated inquiry into the nervous susceptibility of both trance mediums and their audiences and thus into the natural origins of apparently supernatural forms of communication. These medical investigations of spiritualist phenomena built on studies of trance states from earlier decades, including investigations of the clairvoyant perception achieved in mesmeric séances in the 1830s and 1840s, of the marvelous power of religious feeling to cataleptically suspend normal organismic response to the environment, and of the power of the unconscious to produce intellectual marvels or religious revelations outside the ordinary demands of consciousness. In each case, lower cerebral events permit spiritual ideas to take hold of the mind. Yet studies of the objective, physical circumstances in which spiritual events occur emphasized the marvelous potential of that buried, "lower" mind even as they identified it as the seat of nervous pathology or malfunction.

Some of this territory has already been plotted in studies of Victorian psychology and the novel. The work of, in particular, Jenny Bourne Taylor, Sally Shuttleworth, Jane Wood, and Athena Vrettos has taught us how Victorian novelists investigated the organic, and increasingly the neurological, origins of altered awareness, yet also where nervous voices in imaginative literature challenged the medical reduction of spiritual experience to neurosis.[37] Especially relevant to my argument, Taylor has also shown how the structure of Victorian novels dramatizes studies of the unconscious, thus "extending and exploring the limits of realism."[38] These expressions of the unconscious and its suppressed forms of knowledge can resist dominant or "conscious" articulations of identity or authority. The novels I explore recognize this alternative, even subversive voice of the unconscious (or, more exactly in this study, of altered consciousness) but they also *merge* the newly authorized sciences of evolutionary biology and physiological psychology with mystical interpretations of unusual mental experience. In imaginative narratives, the dreamy mind itself becomes the vehicle for the expanded, exquisite, even precise awareness to which the new sciences aspire. Dreamy representations are therefore less subversive or counterfactual ways of seeing than they are what Laura Otis describes as "ganglia in a network of organic and technological communications devices";[39] they are intimate with the modern epistemology that liberates awareness from direct sense perception, even as they revisit what the psychiatrist Henry Maudsley described as "intellect in its infancy."[40]

We now know that the Victorian fascination with exotic mental events and the occult did not oppose authorized medical science but rather became integral to the ways that knowledge was remapped in the nineteenth century—through laboratory experiment, new communications technology, and transfers of energy among physical systems. Thanks to Alison Winter, mesmerism is no longer seen as fringe or popular science; instead, she shows, it helped shape mainstream physiology.[41] Nor can Victorian science be understood crudely to reject all spiritualized accounts of natural phenomena. Even as the late nineteenth-century fashion to biologize cultural differences and destinies appeared to squeeze God out of the human story, Roger Luckhurst has stressed, "the emergence of a scientific culture . . . produced other, less predictable effects." These spandrel-like "strange, unforeseen knowledges" included investigations of telepathy and the spiritual afterlife supported by the new discipline of psychical research.[42] Although the study of altered states and psychic phenomena became a contested site for scientific authority, such research itself was intimate with the most up-to-date developments in science and technology.[43]

This discovery that relationships between the authorized and so-called pseudo-science of the psyche in the nineteenth century are complex and overlapping in turn challenges simple distinctions between evolutionary and metaphysical accounts of the mind. The persistence of dreamy, often mystical phenomena in evolutionist psychology and in evolution-inspired, realist literary investigations of the psyche challenges the cartoonish depiction of Victorian faith at war with Darwinian materialism that drives the evolution debate of our own cultural moment. Although the continuities between scientific naturalism and Protestant theology following the publication of Darwin's major works were established some time ago, the compatibility between spiritual experience (in states ranging from voluminous perception to religious ecstasy) and the deep history of human development is yet to be fully unpacked.[44] Recently, Janis McLarren Caldwell has shown how pre-Darwinian exchanges between medical and imaginative literature combine supernatural and scientific representations of the body. For Caldwell, however, the dualistic, natural theology of Romantic medicine terminates in Darwin's "unitextual or naturalistic explanation of life."[45] Yet Victorian novels, responding to a variety of evolution theories before and after Darwin, allow spiritualist, superstitious, pagan, or other premodern forms of belief to hover over the naturalist depiction of life in the form of aberrant, or "lower" mental events that reveal life's normally imperceptible dimensions and possibilities. The nervous disarray that underlies not only the obscure motives and self-misreadings of characters but also the peculiar, dreamy quality of narrative voice in realist novels across the period gives a spiritual dimension to stories that otherwise seem to describe the social and psychological toll of life in a scientific and secular world. They illuminate and enlarge the rejuvenating promise of the primitive mind, even as they recognize that mind as the production of a disordered or diseased brain.

In so doing, these narratives evoke Victorian understandings of the *evolution* of mind, not simply its correlation with physical events in the brain. Victorian evolutionism, or the "transmutation" or "transformation" of species, combines a number of biological concepts including common descent, heritable acquired characteristics, increasing organic complexity over time, and gradualism, as well as the theory of natural selection developed by Darwin and (independently) Alfred Russell Wallace. Although different combinations of these principles represent different emphases in evolutionary thought, they are not fixed in opposition to one another, as, for example, both the continuation of use/disuse as a possible evolutionary mechanism and an occasional residual notion of inherent evolutionary progress in Darwin's account of species history illustrate.[46] Indeed, even the Victorian scien-

tific opponents of evolution like Georges Cuvier, the younger Charles Lyell, and Richard Owen, who did not accept species transmutation, developed, respectively, the concepts of catastrophism (which identified extinction as the cause of organic succession), gradualism (slow geological transformation over vast periods of time), and homology (the same organ with varying functions in different animals) that remain integral to evolutionary terminology and debate.[47] In psychology, the principle that organic changes did not follow preestablished, archetypal patterns but instead fanned out in response to changing conditions in the environment produced a new hierarchical understanding of the mind, whose status on the ladder of life reflected its degree of nervous complexity rather than its proximity to God.[48] In this context, nervous pathologies could be recognized as expressions of earlier mental or even premental incarnations, as when the organism reverts to unconscious or reflex behavior. The concept of the primitive mind therefore captures not just the new psychology's investigation of the physical origin of mental events but also the evolutionary history within which peculiar mental experiences can be seen in fullest explanatory relief.

My emphasis on the way Victorian psychology frames spiritual experience with human evolutionary history also precludes any direct focus on Freud's account of the unconscious, which in other ways might seem relevant to this study. The fin-de-siècle texts discussed in chapters 4 and 5 of course overlap with Freud's early publications on the subject, including the studies on hysteria with Joseph Breuer (1895), *The Interpretation of Dreams* (1899), and the essays on sexuality (1905).[49] Freud's debt to Jean-Martin Charcot's study of the pathophysiology of nervous illnesses also positions him within the historical scope of this book. Moreover, because he was at once resolutely materialist in his approach to questions of belief and yet both profoundly superstitious and reluctant to engage with occult phenomena in his own practice or research, he reveals a bifurcated attitude to spiritualism characteristic of many of the mental scientists who preceded him.[50] In the early 1920s, he wrote several papers on forecasting dreams and on telepathy, arguing that the former contained infantile wishes projected onto the future, but that there might be evidence for the existence of the latter.[51] Yet in other ways, Freud represents an end to the particular configuration of neurological, evolutionist, and spiritual accounts of mental experience that formed the psychological landscape of Victorian realist novels. His work focused on the unconscious as a *universal* scene of malfunction. As Robinson argues, this "universal yet radically interior dynamic of self" made that unconscious a site of unequivocally post-metaphysical inquiry.[52] In both the medical studies and novels I read here, states of reduced consciousness are

primitive sites of abnormal nervous disarray and often of expanded awareness and untapped human potential. In the realist novel especially, altered consciousness becomes the meeting place of two seemingly irreconcilable ways of seeing. Evolutionary science and spiritualism—two of the great Victorian "discoveries"—offer competing claims on the dreamy mind but also, cooperatively, map its considerable reach.

I. CORPOREAL SPIRIT: THE EVOLUTION AND DISSOLUTION OF MIND

Victorian investigation of "God in the brain" updated the question of the material soul that preoccupied associationist psychology.[53] In keeping with a philosophical tradition that looked back to David Hartley's theory of the nervous transmission of ideas, and beyond that to John Locke's substitution of sensation and reflection for an innate content in consciousness, Thomas Huxley claimed in 1866 that all mental activity is the product of physical laws: "even while the cerebral hemispheres are entire, and in full possession of their powers, the brain gives rise to actions that are as completely reflex as those of the spinal cord."[54] No longer the host of a divinely inspired capacity for reason that privileges human beings above all other living things, mind in Huxley's formulation becomes merely the epiphenomenon of the nervous system.

Such stark materialism was far from uncontroversial, even among the scientifically minded in the mid-nineteenth century. The "discourse of the soul," Rick Rylance has shown, remained the primary philosophical influence on Victorian medical practice, maintaining reformist confidence in the power of the higher, God-given faculties to dominate the lower, animal impulses. Although it did not take firm root in the medical establishment, phrenology—a powerfully materialist approach to personality from the first half of the century that mapped a hierarchy of mental faculties onto the brain—insisted that the human mind could transcend its fundamental physical origins.[55] Even Huxley himself proposed in *Evolution and Ethics* that "intelligence and will . . . may modify the conditions of existence."[56] Moreover, cerebralist approaches to the mind were not necessarily irreligious. The new physiologically based psychology often either incorporated Protestant concepts of the soul or reconfigured these concepts within a natural framework that united soul and body.[57] Although it faced a considerable challenge in studies of the physical world that denied the special status of human beings, natural theology maintained a foothold in the physical

sciences because the latter could be said to reveal, in the physiologist William Carpenter's words, "the wisdom and beneficence of the Divine Author of the universe."[58]

Still, it cannot be denied that the privileged status of human beings in the Christian universe was enormously strained by nineteenth century mental science and its debt to evolutionary theory. Evolutionary biology transformed the mechanical human body, which for all but the most committed eighteenth-century materialists housed an animating or rational soul, into a dynamic organization characterized, like all living things, by the organization, integration and mutual adjustment of parts, and their development or shifting function over time.[59] Already, at the turn of the century, Erasmus Darwin had captured this deep history of the mind and its relationship to individual growth in his effort to explain "[h]ow the first embryon-fibre, sphere or cube / Lives in new forms" and "[l]eads the long nerve" or "expands the impatient sense."[60] Darwin's emphasis on the embodied mind positioned those animal motions that emerge as mental events in the brain within a principle of common descent. "The Great Creator," he proposed, "has infinitely diversified the work of his hands, but has at the same time stamped a certain similitude on the features of nature that demonstrates to us that *the whole is one family of one parent.*"[61] With such understanding, he proposed, medical knowledge should draw on the macro-history of animal movements that determine all emotional and intellectual activity as well as all "production, growth, diseases and decay of the animal system."[62] Robert Chambers's enormously popular, anonymously published *Vestiges of the History of Creation* (1844) similarly argued, albeit within a natural-theistic vision of God's evolutionary "plan," that lower animals demonstrate rudimentary faculties of reason and that despite our greater development, we are "bound up . . . by an identity in the character of our organization with the lower animals."[63] In this respect, he anticipated Charles Darwin's assertion in *The Descent of Man* (1871) that the distinctly human talents of abstraction and self-consciousness have "evolved through the development and combination of the simpler ones" and that human minds are therefore distinguishable from those of other animals only by their level of complexity.[64]

Victorian novelists, as consumers of, contributors to, and in some cases, editors of serial publications, were immersed in the cultural issues surrounding evolutionary biology and mental health that concerned the middle-class reading public.[65] The careers of several prominent intellectuals also highlight intimacies between science and literature in the period: George Henry Lewes, of course, was a physiologist as well as a philosopher and literary critic and, along with George Eliot, belonged to the same salon as Herbert

Spencer and Huxley; Alexander Bain, the founder of *Mind,* the "first English journal devoted to Psychology,"[66] which is sometimes thought to mark its strict disciplinary beginnings, also held the title, among others, of professor of literature;[67] Charles Darwin famously mourned the disappearance of poetry from his reading life.[68] C. P. Snow's mid-twentieth-century lament at the impoverishment of intellectual life by divisions between the "two cultures" of science and the humanities would have resonated for the participants in what Luckhurst calls the "uneven process" of science's professionalization before the end of the century.[69]

These porous intellectual boundaries between imaginative culture and evolutionary science allowed literary figures to express concern about what seemed like biological determinism in the new physiologically based psychology. Charlotte Brontë, scientifically literate and phrenologically inclined, was nonetheless enormously disturbed by her friend Harriet Martineau's claim in *Laws of Man's Nature and Development* (1851) that material conditions proved "the origin of all religion, all philosophies, all opinions, all virtues, all spiritual conditions and influences."[70] G. H. Lewes and George Eliot were sympathetic to investigations of the physiological and evolutionary origins of intellectual and spiritual events, yet nonetheless refused to see intelligence and will as merely the calculable effects of a set of physical causes or as an expression of "molecular changes" in the efferent nerves.[71] Eliot insisted on a volitional self, even if it were formed out of the external and internal contingencies of circumstance—a self, she claimed, that in turn exercises influence over the conditions of thought.[72] Lewes, while recognizing that objectively, mental phenomena arise out of organic events, stressed that mind develops subjectively as individuals adjust to their social environments. Such interaction, he proposed, was stored as experience and released in the form of choice, enabling those individuals to respond in a variety of ways to external pressures.[73]

The endeavors of mental science to restore soul to matter through evolutionary theory (or more specifically a theory of transmutation based in the relationship between an organism and its environment) depended on linking the development of species to the growth of the individual. In "The Development Hypothesis" (1852), Spencer pointed to individual development, or the emergence of complex organisms from simple embryonic beginnings, to demonstrate the evolution of species through successive modifications, stressing there is no evidence whatsoever for special creation. Because we can witness the process of modification under the pressure of environmental influences or through the exercise of particular organs or faculties at the expense of others in growing organisms, it is easy to fathom how, over the

course of millions of years and under the influence of changing varieties of condition, such modifications would eventually produce a mammal from what began as a protozoon.[74]

By the end of the1860s, the new mental science had gained institutional footing, and metaphysical inquiry into the powers of static mental faculties had begun to lose ground to an organic understanding of consciousness as the product of multiple interactive events.[75] This new approach openly used evolutionary principles of development to represent the brain and nervous system. In his second edition of *The Emotions and the Will* (1865), Bain acknowledged developmentalism as an important supplement to his earlier account of the physical character of emotions, which should be traced through the study of lower animals, savages, and children.[76] In this considerably revised edition, he also uses Spencer's language of "adjustment and adaptation" as he describes the reaction of the nervous system to pain and shock.[77] In a review of Charles Darwin's *Expression of the Emotions in Man and Animals* (1872), Bain announced his intentions to revise *The Emotions and the Will* once again so as to further accommodate evolutionary principles.[78] The third edition in 1888 then included a chapter on "Evolution as applied to mind."

Yet it was Lamarckism, rather than Darwinism, that tooled Victorian mental science with an explanation of species change over time and provided the evolutionary model that would dominate nineteenth-century physiological psychology, more powerfully in many ways than the theory of natural selection.[79] Jean-Baptiste Lamarck's theory of the inheritance of acquired characteristics stressed the actions of individual organisms in the emergence of new, heritable traits, and it emphasized animal preferences rather than blind selection as the mechanism of evolutionary change. Lamarck proposed that, by developing habits of use and disuse, individual organisms acquired physical modifications that they then passed down to their offspring—a model for descent with modification as well as for increasing complexity in all life forms.[80] In the context of the new psychology, "evolution" refers to both to progressive phylogeny and to development in the individual brain. These levels of development merge, not only in Ernst Haeckel's proposition that "ontogeny recapitulates phylogeny"[81] but also in Lamarck's account of the influence of habit and the heritability of modified characteristics. Evolution in the individual organism is an event in the evolution of the species; each organism arrives at increasingly complex cerebral arrangements and communicates these to subsequent generations, suggesting that the mind, like the neck of the giraffe in Lamarck's best-known example, becomes strengthened and enlarged, so as to make the most of its environment.

Lamarck describes such changes as evidence of "that remarkable progression that [animals] exhibit in the complexity of their organization, as well as in the number and development of their functions."[82]

Darwin himself proposed in *The Descent of Man* (1871) that, in the development of human mental powers, natural selection worked in combination with the inherited effects of habit. Overall, Darwin's theory of selection had limited influence on the physical study of mind before James reintroduced the concept of selection to inherited mental characteristics.[83] To some extent this may have been because natural selection erased the natural-theological possibility of design at a distance.[84] Yet the agnostic Lewes, who supported other aspects of Darwinian evolution, did not endorse natural selection. Although Lewes emphasized interactions between organism and social milieu over the associationist processes that Bain and Spencer continued to stress, Darwin's exclusive focus on the external conditions of the struggle for existence, he objected, ignored the organic laws that produce modifications of structure in an individual: "the best-fitted individual survives because of that modification of structure that has given it its superiority."[85] Both Darwin and Spencer recognized the difficulty of accounting for useful inherited variations triggered by specific external pressures. Lewes responded that the "struggle of the tissues and organs enables the adaptation of an organism to its external conditions," thus ripening it for selection, and that some of these effects are "produced by very complex and obscure causes in operation during ancestral development."[86]

For novelists, the idea that an organism's interactions with its environment generate ever-increasing complexity was enormously compelling. Beginning with Defoe and Richardson, psychological realism had explored the development of the interior self and moral feeling in relationship to the exigencies of the external environment. Once such interactions between mind and milieu are framed in evolutionary terms, realist concerns with moment-to-moment experience, the nonheroic dimensions of (usually) ordinary lives, and the objective representation of human behavior become concentrated on at once the development of the individual mind and the deep history of human cerebration. Focused through the lens of mental science, Lamarckism provided realist fiction with the philosophical background to describe not just how characters are transformed by circumstance but also how such transformations represent increasingly complex negotiations between a thinking being and its environment with implications for future generations. In Eliot's novels especially, nuanced shifts in feeling record individual response to circumstance, while these in turn register as minute episodes in greater human stories.

Yet while the trope of increasing complexity seems to influence both characterization and narrative form in realist fiction, the novels I investigate in this book also recognize psychological and neurological studies of a reverse evolutionary movement. Even the very teleologically inclined Spencer questioned the notion of inevitable, unidirectional progress. For him, mental faculties, like all other organic phenomena, are the product of accumulated modifications triggered by interactions between an organism and its environment. Such nervous modifications allow for increasing heterogeneity of form and progressive differentiation of function. This tendency of life (including social life) to move in the direction of complexity, however, is balanced by the principle of *dissolution,* or "a destructive change as opposed to a constructive change—a change by which the definite is gradually rendered indefinite, the coherent slowly becomes incoherent, and the heterogeneous eventually lapses into comparative homogeneity."[87] Spencer's account of the nervous substratum and the organizational structure that determines complex events of consciousness along with his theory of dissolution indirectly exercised considerable influence over later-century neurophysiology.[88]

In particular, John Hughlings Jackson, whose medical essays together contain over 60 references to Spencer's *Principles,* adapted the latter's representations of evolution and dissolution in the physical laws of mind for his neurological studies of epilepsy, including of those dreamy symptoms belonging to what we now know as "complex partial epilepsy."[89] For Jackson, evolution represents movement toward increasingly voluntary activity, while dissolution occurs when the highest, most voluntary centers revert to the simplest and most automatic. In seizure, he proposed, the evolutionary nervous movement from the automatic to the increasingly voluntary is reversed: Dissolution is a " 'taking to pieces' in order from the least organized, most complex and most voluntary, towards the most organized, the most simple and most automatic."[90] The excessive discharge of nervous energy that causes a seizure provokes a loss of voluntary movement and an increase in involuntary or automatic activity, which could be expressed as dreamy or voluminous experience.

Jackson's account of nervous evolution and dissolution had a theoretical successor of sorts in degenerationism. In *Degeneration: A Chapter in Darwinism* (1880), E. Ray Lankester proposed that organisms might adapt to "*less* varied and *less* complex conditions of life," leading to a suppression of form, in some cases bringing an animal to a "*lower* condition, that is fitted to less complex action and reaction in regard to its surroundings" than its ancestors.[91] By the end of the century, questions about the structure of the brain, its production of mystical experience, and the role of the mind in human

evolution combined in a powerful narrative of degeneration that identified dreamy or spiritual episodes as a sign of heritable physical decline. Even Henry Maudsley, an asylum physician and editor of the respectable *Journal of Mental Science,* positioned the heritable characteristics of mental illness—many of which could be seen in the symptoms of overactive imagination and hallucination or ecstatic "illumination'—in a degenerative stage in human history.[92] Max Nordau devoted a chapter of his widely read *Degeneration* to the psychology of mysticism, arguing that the mystic's exhausted and "capricious" mind fails to exercise strength of will against an "unrestricted play of associations."[93] The impressions that the nerves communicate to consciousness thus run riot, creating false ideas and judgments of the objective world, which it fills with "ambiguous, formless shadows."[94]

The novels explored in this book assign narrative force to these phantasms, reinvesting the mind with soul at the very point that it seems most physiologically "readable" as an aberrant nervous organization. Identifiable nervous diseases like catalepsy or epilepsy, or the nonpathological dreamy states of reverie or rapture, do not so much explain away their "symptoms"—prophetic vision and trance phenomena including telepathy, clairvoyance, and encounters with the dead or divine—as they provide opportunities for spiritual experience to animate otherwise imperceptible aspects of reality. Evolutionist accounts of the mind, drawn from Lamarck-inspired developmentalism but expanded to account for regressive tendencies in organic life, underpin these narrative studies of nervous insight. Even where, for Doyle and Hardy, Darwinian principles of inheritance determine traits and destinies, episodes of suddenly expanded awareness represent the nervous evolution and dissolution that patterns human responses to the environment. Describing the relationship between second sight and omniscient narration in Eliot's novels, Nicholas Royle reminds us how realist and preternatural sensitivities are linked in *Middlemarch,* where "a keen vision and feeling of all ordinary human life . . . would be like hearing the grass grow and the squirrel's heart beat."[95] Here, Eliot paraphrases Huxley, who illustrated the common physical basis of all life and its marvelously complex but imperceptible configurations by remarking that "the wonderful noonday silence of a tropical forest is, after all, due only to the dullness of our hearing; and could our ears catch the murmur of these tiny Maelstroms, as they whirl in the innumerable myriads of living cells which constitute each tree, we should be stunned, as with the roar of a great city."[96] Evolutionist accounts of the retreating movement as well as the increasing complexities of human nervous organization are what enable such peculiar conflations of science and soul in Victorian realist fiction.

II. WILL, AUTOMATISM, AND SPIRITUAL EXPERIENCE

Although, Huxley argued, the grandeur of human intellectual achievement is illuminated, not reduced, by the evidence of descent from lower animals, yet neither our pursuit of the moral life nor our experience of God is categorically removed from the "selfish passions and fierce appetites" that represent our baser nature as well as the behavioral characteristics of other, lower animals.[97] Victorian investigations of the physiological origins of such phenomena as conversion experience, prevision, and ecstatic somnambulism implicitly rejected distinctions between the higher, soul-sustaining powers of reason, faith, and will and the lower, life-sustaining faculties of sensation and desire. Evolutionary theory's demotion of the will, especially, from an innate, God-given faculty to a developed trait implied that subvolitional or automatic events in the mind-brain need be no less spiritually significant than higher events. In *The Physiology of Mind* (1876), Maudsley suggested that "it would belie observation less to place an ideal entity behind an innate, instinctive impulse of the animal than behind the gradually fashioned will of man."[98] In *Natural Causes and Supernatural Seemings* (1886), he observed that nature does not work "by means of complete minds only,"[99] and that human thought and faith, although regulated by "the common consent of mankind" may emerge from the illusions that accompany defective character.[100] Maudsley emphasized the influence of the incapacitated mind on the development of religious institutions. Yet in *Varieties of Religious Experience,* William James quoted Maudsley's claim in order to show that even the most aggressively positivist interpretation of religious experience must look forward to the net spiritual outcome of revelation and conversion rather than skeptically backward at the natural origins of such events: hysteric fit, poor digestion, overtaxed nerves, or (in epilepsy) a discharging lesion in the occipital cortex may be at the root of supernatural experience, but this should not compromise their spiritual value any more than the neurotic scientist should have his findings dismissed as the epiphenomena of nervous strain.[101]

Some mental physiology did preserve the higher agency of the will as a metaphysical phenomenon independent, or at least semi-independent, of the sensorimotor system. Phrenology, which localized mental faculties in discrete regions of the brain, also proposed that, by deliberate cultivation of the more civilized faculties at the expense of the baser ones, any individual could choreograph his or her own moral improvement.[102] This assumed, of course, that such power of cultivation transcended that of the individual faculties themselves. Despite Carpenter's skepticism about any theory of localization as the basis of psychic phenomena,[103] his account of the will echoed phre-

nology's model of self-advancement, allowing that any state of consciousness can be subjected to moral judgment and then may be modified by a freedom or power that we have to act in accordance with such judgment (*Principles* 3, 76). This self-determining power, he claimed, can "within certain limits" (5) enable us to shape external circumstances to our own ends. The will restrains the automatic impulses to bodily and mental movement by an effort of attention that in turn increases the nervous tension in a particular region of the cortex concerned with ideation (384). Such mental exercise, with its influence over thought and action, cannot be explained by the physical topography of the brain or reduced to the exchanges between sensory input and cerebral activity that produce ideation. As Carpenter put it,

> To whatever extent . . . we may be ready to admit the dependence of our mental operations upon the organization and functional activity of our nervous system, we cannot but feel that there is *something beyond and above* all this, to which, in the fully developed and self-regulating intellect, that activity is subordinated. (7)

Although Carpenter located the will in a physical environment by observing that individual and social habits played a large role in its formation (423), he stressed its independence from the internal and involuntary movements of the body and proposed that mental health could be measured in the ratio between voluntary and involuntary mental events.[104] He traced the supposed facts of spiritualism, including eye-witness accounts of marvels like materialization or levitation and personal testimonies from Methodist revivalists and camp-meeting participants, to the psychological phenomena of expectancy or suggestion. These "miracles" were produced by automatic cerebral movements responding to a dominant idea.[105] Such emancipation of the mind from the disciplinary activity of the will, he stressed, suggested that converts to spiritualism were close relatives of madmen:

> In all ages, the possession of men's minds by dominant ideas has been most complete when these ideas have been religious aberrations. The origin of such aberrations has uniformly lain in the preference given to the feelings over the judgment [and] the inordinate indulgence of emotional excitement without adequate control on the part of the will. . . . [Such people] are no more to be argued with than insane patients."[106]

In identifying religious transport with insanity, Carpenter drew upon earlier medical literature on nervous pathology and spiritualism. J. D. Esqui-

rol's enormously influential *Mental Maladies* (1817) had identified religious melancholic, ecstatic, and demoniacal possession as conditions triggered by nervous habit, easily excited imagination, and pusillanimous disposition;[107] while James Cowles Prichard proposed in *A Treatise on Insanity* (1835) that the ecstatic affections—expressed in dreaming, somnambulism, delusion, trance, and ecstasy—were suspensions of the external sense that should be linked to pathological mental disorders.[108] Carpenter's confidence in the legislative power of the will also echoed reformist approaches to the treatment of mental illness. In 1843, John Barlow, an associate of the asylum reformist John Conolly, had argued that madness could not be recognized in delusions, per se, but rather in "the want of power or resolution to examine them."[109] Barlow, like Conolly, advocated moral management and cultivation of the will in the insane rather than punishment.

Yet the idea that a robust and independent will could keep lower and lazier regions of the mind from overwhelming the higher and causing physical and mental disease had limited traction in the second half of the century. Physiological investigations into unconscious mental reflexes and latent cognitive processes tended to emphasize the automatic events that remain inaccessible to consciousness. Dreams, trances, somnambulism, and double-consciousness were all, as William Hamilton explained, exotic productions of the brain's "obscure recesses,"[110] and these, far from being restrained by the exercise of the higher faculties, demonstrate the limits of self-disciplining thought. Although the disruption of ordinary consciousness by these recessed powers may indicate deranged activity in the nervous system, they also afford us glimpses into regions of the mind unfettered by ordinary nervous constraints.

This interest in mental automata owed much to Thomas Laycock's 1844 essay on "The Reflex Function of the Brain," which applied Marshall Hall's study of reflex activity to mental phenomena. Reflex motor phenomena, Hall had shown, are independent of sensation, perception, volition, or consciousness. Laycock proposed that encephalic ganglia were also subject to the laws of reflex action, suggesting that multiple involuntary nervous events occur in the cerebrum, accounting for unconscious mental activity. "If the brain be indeed the organ of ideas, and the cerebellum of combined movements, the inference is manifest that they are both excitors of reflex actions."[111] This "automatic action of the cerebrum" represented the same principle that Carpenter named "unconscious cerebration" to describe intellectual activity that takes place outside ordinary waking awareness as an effect of "reflex action in the cerebrum" (*Principles,* 515).[112] Carpenter attributed the phenomena of spiritualism and mesmerism (where genuine and unstaged)

to unconscious ideo-motor activity and events stored in the memory that do not penetrate consciousness. Citing Hamilton's account of "latent mental modification," he argues that the mind may engage in considerable intellectual undertakings without conscious awareness (516). This principle of reflex shaped numerous studies of mental automata, including elder John Addington Symonds's analysis of the transformation of will into habit, the physician Daniel Hack Tuke's study of sleepwalking and hypnotism, Maudsley's account of higher-order nervous events in consciousness, and Jackson's representations of the evolution of consciousness and the neuropathology of epilepsy.[113]

Such investigations, focused on the will-in-abeyance, endeavored to explain dreamy phenomena such as religious trance, clairvoyance, lucid vision, and double consciousness in terms of naturally occurring, recessed powers belonging to lower or more primitive activity in the brain. Carpenter positioned the normal process of unconscious cerebration—that is, the accumulated memories of minute experiences outside consciousness that congregate to form intuitions—within the history of the evolving human brain, whose size, complex structure, and progressive additions he compared with other vertebrate animals including monkeys and anthropoid apes (*Principles,* 116). In human cerebro-spinal organization, sensations and ideas that penetrate the highest, conscious regions of mental activity influence the will to produce or suppress motor activity; those that do not reach high enough will generate only reflex activity (123–25). These lower cerebral events allow spiritual ideas to take hold of the mind, working through the reflex functions and bypassing the corrective activity of the will. In a "historical and scientific" account of mesmerism, he recommended early scientific training to encourage habits of accurate observation and to check the influence of dominant or prepossessing ideas. Such ideas are "most tyrannous and most likely to spread," he noted, "when connected with religious enthusiasm."[114] Demoniacal possession, ecstatic revelations of Christian visionaries, Methodist revivals, and spiritualist encounters with the departed may all be traced to the force of a dominant idea and the heightened nervous state attending expectation. The ecstatic or somnambulist subject is a "conscious automaton" at once freed from the influence of the will that directs it in the waking state and at the same time preternaturally alert to suggestions conveyed through the senses, which are locked up in normal dreaming sleep. It may thus be made to "think, feel, say or do anything that its director wills it to think, feel, say or do," while its whole power is concentrated on the state of the present moment.[115] Hence, in this

state in which its higher activity of the will is suspended, the mesmerized subject may be capable of extraordinary acts of perception or displays of physical strength.

The coincidence of powerful ideas and reflex nervous activity overwhelming higher conscious activity appears in other accounts of spiritual automata. In his essay on habit, Symonds included a section on table-turning, which identified "secondarily automatic" activity of the séance participants—partly prompted by idea or suggestion and partly reflex—as the cause of the apparent wonderful movement of the table.[116] Maudsley similarly interpreted hallucinations, religious excitement, and belief in miracles as the effect of undisciplined ideas on the lower sensorimotor system, which then generates powerful sensory experiences automatically, or without the intervention of consciousness. Such phenomena are therefore related to those of somnambulism and the automata of epilepsy as well as to the instinctive behavior usually associated with lower animals.[117] This nervous susceptibility, he argued, represented degeneration both at the level of cerebrospinal nervous coordination in an individual whose life should properly "represent[] a progressive development of the nervous system"[118] and in the evidence that nervous weakness was a feature of "bad descent."[119] Tuke identified "inhibition of certain cerebral centers . . . along with normal or increased ability of ideas," as the physical representation of what is experienced psychically as dreaminess.[120] He also suggested that Jackson's principle of dissolution should be applied not only to pathological conditions like epilepsy but also to temporary suspensions of conscious activity like dreaming and sleepwalking along with the ecstatic experiences or hallucinations that often accompany both spontaneous and artificial somnambulism.[121]

However, not all scientific accounts of the physical basis for mysticism and spriritualism objectified them as symptoms of disease or degeneration, and the therapeutic approach to dreamy experience included investigation into the buried talents that such experience might reveal. John Elliotson's efforts to introduce mesmerism into mainstream medical science in the 1840s included publication of lengthy accounts of séance room marvels and suggested that latent mental powers could be tapped to discover the body's own healing methods and provide a natural anesthesia in surgical operations. In the same decade, James Braid developed hypnotism as a therapeutic technique in the treatment of nervous disorders after studying the religious exercises of Hindu mystics and documenting the remarkable instances of exalted perception that took place in these states.[122] Subsequently, in France, hypnosis became a favored technique for the treatment of hysterics under

the influence of Jean-Martin Charcot at the Salpêtrière Hospital in Paris and for suggestive therapeutics developed by the Nancy School in the 1860s. Although it did not acquire the foothold in medical practice in Britain that it did in France, this form of therapy was the subject of articles, reports, and correspondence in *Brain,* the *Journal of Mental Science,* and the *British Medical Journal,* as well as book-length studies by Tuke and Albert Moll (whose *Hypnotism* went through several editions in Britain in the 1890s).[123]

By the end of the century too, the potential of nervous automata to reveal latent powers of mind provided overlap between psychology and psychical research. James, who also located the origin of spiritual events in cerebrospinal physiology, stressed in his lecture on religion and neurology (1902), that the "genius" of highly religious individuals and spiritual leaders is often expressed in abnormal psychic visitations, including trances and aural and visual hallucinations, which are, in turn, "symptoms of nervous instability."[124] For James, however, phenomena produced in mystical states challenge the assumption that mental life is governed by a single consciousness in which all facts are delivered by sense-perception and suggest instead that there are hidden regions of the mind that deliver information independently of the senses. The lowly, pathological origins of such events compromise neither their spiritual nor their scientific significance. Empirical evidence of divine or ideal forces impacting the real events of the world as well as of psychological well-being in the "twice-born" demonstrates that the "facts" of the subliminal mind and the supernatural should not be ignored by psychologists. His argument echoes James Sully's suggestion in "The Dream as a Revelation" that the transition from waking to dreaming state should not be considered a temporary mental degeneration but rather as a "mental dissolution"[125] in which we are able to recover "the functional activities" of the "lower" organs of the brain that drive what is "instinctive, primitive, [and] elemental" and that have been suppressed by the controlling activity of regulative reflection.[126] Sleep thus unveils a collection of "primal" sensations and impulses that connect us "with the great sentient world."[127] With an overtly spiritualist emphasis, the prominent psychical researcher F. W. H. Myers similarly investigated the existence of a primitive subliminal mind housing forms of awareness that significantly outsized those of the supraliminal or conscious mind. For Myers, this mind contained the key to the survival of personality after death. Our study of human nature, he claimed, could be enriched by a "nascent science" investigating evidence of the afterlife.[128] Rather than diminished by its automatic activity, the primitive mind might reengage its ancient subliminal talent for perception enlarged beyond the ordinary dimensions of conscious experience.

III. THE REALIST NOVEL AND THE DREAMY MIND

Dreamy or "voluminous" mental states, Crichton-Browne proposed in 1895, are "of interest from a medical and psychological and a philosophical point of view" (*SL* 1). He might well have added "literary," since among the subjects and students of dreamy confusion he cites, he includes Scott, Dickens, Wordsworth, Coleridge, Hardy, Tennyson, and Coventry Patmore. On the face of it, the dreamy mind seems unsuited to the dilatory forms of prose fiction and narrative poetry, since its effects are generally "indescribable" and "almost invariably concerned with those ultimate ideas—space, time, matter, motion, and relativity—that are beyond the domain of certain knowledge and, according to Spencer, unthinkable." They produce, says Crichton-Browne, "momentary realizations . . . of Nirvana or the cessation of personal being or purgatorial pains more searching than any that Dante conceived" (7). Not only do they outdo the spiritual representations possible even in literary language, but they also obliterate all the anchors of consciousness that enable us to construct a sense of reality: personal identity, sense of time, the organization of the self in space, and the boundary between self and world. Yet in other ways they represent many of the objects of literary imaginative endeavor: "glimpses of real insight into an otherwise impenetrable past" (4), an uncanny identification of present and past (3), a "sense of reminiscence" that blends into "a sense of prescience" (1). The possibility of extracting forgotten details from the past or the myriad events that invisibly envelope a single moment in the present, as well as of assembling from these a vision of the future, might be said to constitute the spiritual dimension of realism—what Lewes describes as a power of representation beyond "the simple gatherings of sense."[129]

Crichton-Browne points out how such insight may be the morbid symptom of nervous disorder or degeneration, commonly epilepsy. Under the influence of the dreamy state, "the certitudes of science" dissolve into "the certitudes of faith" (*SL* 11). Such experience is symptomatic of disequilibrium in the nervous centers. Dreamy states are often precipitated by meditation on religious subjects and often dispelled by deliberately drawing the attention to some concrete element in the environment, as when Wordsworth reported that he might "grasp[] at a wall or tree to recall myself from the abyss of idealism to the reality" (11). Citing Jackson's account of voluminous mental events, Chrichton-Browne stresses that such exercises restore object consciousness, which has at least temporarily been overcome by subject consciousness, the usual symptom of an abnormal nervous discharge (24).

As unhealthy distortions of perception, dreamy experiences seem anathema to the forms of realist and naturalist narrative. Although these represent somewhat discrete movements in nineteenth-century literary history, I link them here as fictional endeavors to provide, not just a window on the world, but an account of the objective conditions that determine how characters experience that world—the conditions of the internal, physiological environment as well as the external conditions of heredity, social change, and biological adaptation that shape the events those characters must confront. The word "realism," as Levine has put it, is at once "dangerously multivalent" and "inescapable," describing simultaneously an effort to capture a preverbal, external truth, a loyalty to the ordinary over the exceptional, and a respect for facts, no matter how disagreeable.[130] Not only do realism and naturalism distinguish themselves from idealist literary form by asserting a reality independent of mind, but they also assume we can come to know this reality through systematic inquiry.[131] They are thus consilient, in E. O. Wilson's sense of the term, with neurophysiology and evolutionary theory as they "probe . . . the physical basis of the thought process itself."[132] As they trace behaviors triggered by nervous pathways that become overcharged or by the cerebral regions that become malnourished as the brain reacts to specific events and circumstances, they objectify the deepest levels of subjective experience.

Yet this is not necessarily what (broadly construed) realist narrative fiction achieves at all, as anyone picking up *Villette* or *Bleak House* for the first time will testify. Peter Brooks has argued that realism's limits are tested in the Victorian novel, as its loyalty to the ugliness of the everyday is strained by its competing attention to the "play of fancy . . ."[133] or to the social truths, whose dimensions are such that they can be grasped only in forms that do not belong to realism's system of representations.[134] The chapters that follow show that as realist narrative tries to accommodate the discoveries of Victorian mental science, new facts about the physical world paradoxically invite narrative forms that distort ordinary perception. "Objective" narrators are frequently unreliable or nervous subjects themselves, whose own episodes of reverie, ecstatic illumination, or cataleptic withdrawal are likely to bleed into their representations of characters and events. If, as Spencer claimed in the third edition of his *Principles of Psychology,* consciousness works through the antithesis of subject and object, barring our "knowledge of that ultimate reality in which subject and object are united,"[135] then novels repeatedly break the rules of consciousness: They deliver recessed memories, intuited connections, or clairvoyant glimpses into remote events and minds through the medium of either a first-person narrator who, "looking back,"

sees and knows more than she or he describes, or of free indirect discourse, in which awareness hovers in omniscience over thoughts assigned to particular characters. Such nervous narrative instability is characteristic not only of the distracted and dreamy voices of *Villette*'s Lucy Snowe or *Bleak House*'s Esther Summerson, but also of Dickens's haunting omniscient narrators who inhabit regions of space or time that do not represent ordinary waking experience, like the voice that moves with the fog across all of London at the beginning of *Bleak House,* or the observer of Coketown in *Hard Times* who records how the identical and repeated actions of its inhabitants today and yesterday and tomorrow matches the undifferentiated topography of the town. It is true of even of Eliot's intellectual narrators whose ironic depiction of their characters' narrow thoughts can become suddenly bloated with the imagery of past or distant events of which those characters must have little or no cognizance, like the "slow urgency of growing generations" and the "corpses of blooming sons" that succeed Gwendolen Harleth's discovery of Daniel Deronda's Jewish identity.[136] The narrators that describe Hardy's Wessex landscapes too can drift from naturalist matter-of-factness into a kind of intoxicated state in which those landscapes and the figures that inhabit them appear profoundly spiritual: the revelers who return to the d'Urberville farm before Tess's seduction, for example, show more of the narrator's state of mind than of themselves when they appear in an "opalized circle of glory"[137]; and Egdon Heath at the opening of *The Return of the Native* has the sublimity of Shelley's Mont Blanc.

Nicholas Dames has shown how the disciplinary overlap between psychology and literary criticism in the nineteenth century produced a "physiology" of novel reading that assessed activity in the brain as it responds to a lengthy text. Patterns of nervous receptivity or "rhythms of attention and inattention . . . buildup and charges of affect," make reading a nervous performance rather than a scene of moral instruction.[138] The dreamy, frequently inattentive, and cognitively lazy practice of reading that Dames identifies as a focus of literary and social criticism in the period also, however, shares some of the qualities that, for the Victorian audience, underlie artistic greatness. In his study of the physiological origins of dreams, reverie, and spectral illusions, *The Philosophy of Sleep,* Robert Macnish stresses the power of the dreaming mind to reach imaginative heights that ordinary consciousness represses. Even the most "dull and passionless" mind can be "lighted up with the Promethean fire of genius and romance; the prose of their frigid spirit is converted into magnificent poetry."[139] This homage to the power of the mind to generate ideal forms anticipates the principles of criticism outlined by E. S. Dallas in *The Gay Science* (1866), which integrate literary aesthetics

and psychology. Arguing that criticism should be understood as a "science of pleasure," Dallas located the aesthetic experience in the hidden regions of the mind that do not enter the range of consciousness.[140] Imagination, thus understood, "is but another name for the automatic nature of the mind or any of its faculties," a set of "involuntary movements of thoughts unconscious or half-conscious"(*GS* 1:194–96). While art "portrays what we have seen and describes what we have heard" it differs from science because it "appeals to the unconscious part of us. . . . [a]wakening distant associations and filling us with a sense of mental possession beyond that of which we are daily and hourly conscious" (1:316). Art appeals to the "absent mind" that "haunts us like a ghost or a dream" (1:199), while science demands the prosaic and immediate work of conscious attention. Dallas contrasts this "occult power" of the poet, "suggesting something beyond and behind knowledge" (1:318), with the cruder art of the novel, which appeals merely to the pleasure of the palate. The association of the novel, and specifically of naturalist prose, with everyday awareness implicitly aligns it with science and its drudging attention to the objects of sense-perception and to consciousness built through the accumulation of knowledge.

Yet, in volume 2 of *The Gay Science,* Dallas sees the novel expressing the modern psyche and emphasizes the former's historical turn from the public and heroic to the private, the sensational, and the pleasurable. The novel is not exclusively the art form of the higher intellectual faculties. Alongside Eliot's depiction of the "higher consciousness which is known to bring higher pains" (2:123) and the novel of character, in which "man mould[s] circumstances to his will" (2:293), we find forms of modern popular fiction, particularly the sensation novel, in which character is ruled by plot or circumstance: In the spirit of Zola's radical naturalism, the sensation novel makes character and action the effect of milieu. In these same novels, it is not the reasoning mind but rather the disturbed and primitive minds of "idiots" or "half-witted creatures" that provide the crucial perspective on events and enable the plot to resolve (2:292). As modern readers "fly thought and cultivate sensation"(2:323), the novel delivers lower forms for lower minds and substitutes the involuntary pleasures of sensation for action and deliberation.

The nineteenth-century realist novel's attention to the "lower mind" does not quite subvert "Darwin's plots," as Gillian Beer argues of the jubilant, writerly dimensions of *Tess of the d'Urbervilles* that destabilize that novel's bleaker evolutionary themes.[141] It scarcely disturbs or "punctuates" the gradualist teleology that Levine recognizes as an (albeit unstable) "groundwork of nineteenth-century realism."[142] However, the representation of automatic or trance phenomena in these texts does suggest a countermovement to evolu-

tionary progress that, while it positions spiritual experience within the physical history of the species, also haunts scientific observation with dreamy intuition. As the novels trace spiritualized, dreamy states to a primitive mental condition that persists alongside human evolutionary achievement, they identify intuition, mystical foresight, and clairvoyant imagination as atavistic powers of mind that either enhance or complicate empirically derived forms of knowledge. The naturalization of spiritual experience by nineteenth-century physiological psychology illuminates the recesses of the primitive mind. Yet in the very science-savvy narrative fiction discussed in the chapters that follow, this mind becomes an awkward object of study for evolutionist models of progress like Lamarck's principle of use and inheritance, which assumes a law of increasing fitness, or like Auguste Comte's sociology, which proposes the historical growth of human intellect beyond theology and metaphysics to positivism.[143] The haunting influence of the dreamy mind on narrative realism resists imperialist and eugenicist stories of advancing civilization and physical and moral perfection. It does so even as the theory of natural selection, with its emphasis on chance and contingency, removes the same stories of progress from evolutionary biology.

Carving moral and spiritual meaning out of an evolutionary understanding of the mind is the tall task that imaginative literature undertakes as it responds to medical science. The novels I have chosen to explore here in one way or another depict the social realities their characters navigate through the spiritualized dreamy states experienced by those characters. Despite Brontë's attention to the morally elevating power of will and its potential to overcome nervous momentum in the body, her heroines navigate their adverse circumstances and achieve their profoundest spiritual insights when in a state of near nervous collapse. Dickens's ghosts are comical in objective form, but as subjective "Ghost[s] of an Idea,"[144] they represent recessed dimensions of mental experience that illuminate social and familial connections imperceptible to ordinary attention. In different ways, George Eliot's and Thomas Hardy's studies of the effect of circumstance and environment on will, sympathy, and self-determination draw on episodes of suspended awareness, spiritual elevation, or reverie as much as on the myriad, minute events that compose the social and evolutionary histories within which characters are forced to play their part. In so doing, their novels endeavor to recover moral meaning from the physiological processes of nervous development and retreat, as they turn to the dreamy state—the visions, and episodes of prescience or reverie whose origin is profoundly physical but whose intuitive reach is often greater than the sum of its physical parts and whose force is sometimes socially liberating. Wilkie Collins and Arthur Conan Doyle

adapt this menu of dreamy effects to the form of the detective novel, exploring how trance states and subliminal awareness complement the investigative tools of anthropometric and forensic measurement. Although Doyle became a convert to spiritualism sometime after he had buried Holmes for good, the substitution of dreamy intuition for moral discernment in the novel's depiction of character and conduct seems preliminary to the strong spiritualist themes of his later fiction. The detective stories, however, share the focus of this otherwise eclectic group of writers for which the depression of higher and more spiritual states to their humble physical origins is a signature of their physiological-psychological realism.

In "The Dream as a Revelation," Sully observed of night dreaming that, while modern science seeks to account for the irrational side of dream life, the latter must also be understood as an "extension of human experience [and] a revelation of what would otherwise have never been known."[145] The realist novel amplifies this double task of the psychology of dreaminess—though in this case of the dreamy states in which ordinary waking consciousness is so estranged and compromised. It endeavors to account for the biological origins of spiritual experience and at the same time to illuminate the recessed mental powers that make such experience possible. Here, distortions of the temporal and spatial relationships among characters and events reveal larger realities than social circumstance or conscious perception allow for. The spectral dimensions of these dreamy episodes deliver a spiritual transformation of the physical world even as they reveal the origins of such spirituality in the nervous pathways of the primitive mind.