Imagining Minds
The Neuro-Aesthetics of Austen, Eliot, and Hardy

Kay Young

THE OHIO STATE UNIVERSITY PRESS
Columbus
## CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of Illustrations and Tables</td>
<td>vii</td>
</tr>
<tr>
<td>Prologue</td>
<td>ix</td>
</tr>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td><strong>PART I: JANE AUSTEN AND SELF-CONSCIOUSNESS</strong></td>
<td></td>
</tr>
<tr>
<td>Chapter 1 “A Mind Lively and at Ease”: Imagination and <em>Emma</em></td>
<td>29</td>
</tr>
<tr>
<td>Chapter 2 “You Pierce My Soul”: Feeling Embodied and <em>Persuasion</em></td>
<td>51</td>
</tr>
<tr>
<td><strong>PART II: GEORGE ELIOT AND OTHER-CONSCIOUSNESS</strong></td>
<td></td>
</tr>
<tr>
<td>Chapter 3 “A Voice Like Music”: The Problem of Other Minds and <em>Middlemarch</em></td>
<td>71</td>
</tr>
<tr>
<td>Chapter 4 “Beloved Ideas Made Flesh”: The Embodied Mind and <em>Daniel Deronda</em></td>
<td>94</td>
</tr>
<tr>
<td><strong>PART III: THOMAS HARDY AND NONINTROSPECTIVE CONSCIOUSNESS</strong></td>
<td></td>
</tr>
<tr>
<td>Chapter 5 “Now I Am Melancholy Mad”: Mood and <em>Jude the Obscure</em></td>
<td>127</td>
</tr>
<tr>
<td>Chapter 6 “That Blue Narcotic Haze”: Dreams, Dissociation, and <em>Tess of the D’Urbervilles</em></td>
<td>157</td>
</tr>
<tr>
<td>Coda</td>
<td></td>
</tr>
<tr>
<td>The Neurology of Narrative</td>
<td></td>
</tr>
<tr>
<td>Kay Young, Ph.D., and Jeffrey L. Saver, M.D.</td>
<td>185</td>
</tr>
<tr>
<td>Acknowledgments</td>
<td>195</td>
</tr>
<tr>
<td>Bibliography</td>
<td>197</td>
</tr>
<tr>
<td>Index</td>
<td>207</td>
</tr>
</tbody>
</table>
ILLUSTRATIONS & TABLES

Figure 1 From Herman L. F. Helmholtz, *On the Sensations of Tone as a Physiological Basis for the Theory of Music*, 1954. 86

Figure 2 From Herman L. F. Helmholtz, *On the Sensations of Tone as a Physiological Basis for the Theory of Music*, 1954. 87

Figure 3 Representation in cross-section of the cerebral cortex’s sensory strip. From Wilder Penfield and Herbert Jasper, *Epilepsy and the Functional Anatomy of the Human Brain*, 1954. 164

Figure 4 Penfield’s “homunculus.” From Wilder Penfield and Herbert Jasper, *Epilepsy and the Functional Anatomy of the Human Brain*, 1954. 165

Table 1 Forms of dysnarrativia. 189

Table 2 Dysregulation of decoupling—A preliminary taxonomy. 192
“Nor praise the vermilion in the rose,” she read, and so reading she was ascending, she felt, on to the top, on to the summit. How satisfying! How restful! All the odds and ends of the day stuck to this magnet; her mind felt swept, clean. And then there it was, suddenly entire; she held it in her hands, beautiful and reasonable, clear and complete, the essence sucked out of life and held rounded here—the sonnet.

—Virginia Woolf, To the Lighthouse

To read literature, to commit the mind to imagining to and through how a work of literature imagines, means to know something of the unbound, something of the expansion that moves us beyond the pressing immediacy and presence of the world—to know the life of the mind. But I think, too, it means to know something of a great longing for the world and to know our place in it—as a means of having our selves. Teaching a seminar of graduating seniors what has become for me a life-defining work of literature, George Eliot’s Middlemarch, I asked why the novel suggests we wonder and search for that which is beyond ourselves, why the most expansive minds of the text—Lydgate, Will, and maybe most of all Dorothea—never feel self-satisfaction, always reach out for that which is beyond themselves. We came to see that the search for attachment—to a person, an object, a work of art, an idea—held open the possibility of feeling not alone, of feeling that one fits with or in relation to, of knowing the meaning of expansive connection between self and world.

Literature holds open that possibility of feeling the meanings of attachment and expansion because of how it calls upon us to imagine. In Alan Bennett’s The History Boys, a remarkable moment of quiet exchange happens between the literature teacher Hector (surely named for the Iliad’s
Trojan warrior) and one of his students, Posner, the one who will himself become a teacher of literature. They meet in a place of shared meaning through the poem “Drummer Hodge” by Thomas Hardy:

_Hector:_ Uncoffined is a typical Hardy usage. It’s a compound adjective, formed by putting “un” in front of the noun or verb, of course. Unkissed, unrejoicing, unconfessed, unembraced—it’s a turn of phrase that brings with it a sense of not sharing, being out of it, whether because of diffidence or shyness, but holding back, not being in the swim of it. Can you see that?

_Posner:_ Yes, sir. I felt that a bit.

_Hector:_ The best moments in reading are when you come across something, a thought, a feeling, a way of looking at things that you’d thought special, particular to you. And there it is set down by someone else, a person you’ve never met, maybe even someone long dead. And it’s as if a hand has come out and taken yours.

The life of the mind was my father’s life. It is to him that I write a thought, a feeling, a way of looking at things—these words. His is the hand that I seek across death, across time. It is to him, my best reader, my best teacher, that I dedicate this book.
TO MY FATHER
Stanley J. Young
(1925–2007)
1. THE MYSTERY OF MIND

A schoolboy, on the way to becoming a writer, notes on the inside cover of his poetry anthology:

1) What is the meaning of the poem and what is the experience?
2) What thought or reflection does the experience lead us to?
3) What mood, feeling, emotion is stirred or created by the poem as a whole? (Didion, *The Year of Magical Thinking* 41)

As readers of literature, we understand the young John Gregory Dunne’s questions to be ours, too, because they address what the work of literature creates—meaning, thought, reflection, mood, feeling, emotion—and because they prompt us to wonder how it is possible that literature creates that which consciousness creates: experience.

A philosopher of mind notes about the physical nature of mental experience:

If we acknowledge that a physical theory of mind must account for the subjective character of experience, we must admit that no presently available conception gives us a clue how this could be done. The problem is unique. If mental processes are indeed physical processes, then there is something it is like, intrinsically, to undergo certain physical processes. What it is for such a thing to be the case remains a mystery. (Nagel, “What is it like to be a Bat?” 447)
And as minded beings, we understand Thomas Nagel's question to be ours, as well: how can a physical theory of mind account for the subjective character of experience?

David Chalmers calls this “the hard problem of consciousness”:

The hard problem . . . is the question of how physical processes in the brain give rise to subjective experience. This puzzle involves the inner aspect of thought and perception: the way things feel for the subject. When we see, for example, we experience visual sensations, such as that of vivid blue. Or think of the ineffable sound of the oboe, the agony of an intense pain, the sparkle of happiness or the meditative quality of a moment lost in thought. All are part of what I am calling consciousness. It is these phenomena that pose the real mystery of mind. 1

The “easy problem of consciousness” for Chalmers is understanding the brain functions that can be measured, studied, and located organically and behaviorally through cognitive and neuroscience testing, that which defines objective consciousness: the ability to discriminate, categorize, and react to environmental stimuli; the integration of information by a cognitive system; the reportability of mental states; the ability of a system to access its own internal states; the focus of attention; the deliberate control of behavior; the difference between wakefulness and sleep (“Facing” 200). However, what the study of brain function has yet to reveal is why we have subjective consciousness, meaning how is it possible for subjectivity to arise from the physical processes of the brain? Why do we have internal lives? Beyond the processing of information, as in visual or auditory sensation, how is it possible that we have the felt-quality of seeing or hearing, the experience of feeling or thinking about our aliveness? Experience, point of view, orientation, ego, subjectivity, consciousness—these are the words that hold the idea of “mind.” This, as Chalmers puts it, is “the real mystery of mind.” Acknowledged in the neurosciences, the mystery of mind, according to the

1. David Chalmers, “The Puzzle of Conscious Experience,” 62. For his extensive discussion of this puzzle, see Chalmers’s The Conscious Mind: In Search of a Fundamental Theory. Other recent important contributions to the literature on consciousness and the nature of mind include The Journal of Consciousness Studies; Paul Churchland’s Matter and Consciousness; Paul and Patricia Churchland’s On the Contrary: Critical Essays, 1987–1997; Francis Crick’s The Astonishing Hypothesis: The Scientific Search for the Soul; Daniel Dennett’s Brainstorms: Philosophical Essays on Mind and Psychology and Consciousness Explained; Gerald Edelman and Giulio Tononi’s A Universe of Consciousness; Richard L. Gregory’s The Oxford Companion to The Mind; Colin McGinn’s The Mysterious Flame: Conscious Minds in a Material World; Thomas Nagel’s The View from Nowhere; Steven Pinker’s How the Mind Works; David Rose’s Consciousness: Philosophical, Psychological and Neural Theories; and Adam Zeman’s Consciousness: A User’s Guide.
neurologist Antonio Damasio, is

a major gap in our current understanding of how neural patterns become mental images. The presence in the brain of dynamic neural patterns (or maps) related to an object or event is a necessary but not sufficient basis to explain the mental images of the said object or event. We can describe neural patterns—with the tools of neuroanatomy, neurophysiology, and neurochemistry—and we can describe images with the tools of introspection. How we get from the former to the latter is known only in part, although the current ignorance neither contradicts the assumption that images are biological processes nor denies their physicality . . . At the level of systems, I can explain the process up to the organization of neural patterns on the basis of which mental images will arise. But I fall short of suggesting, let alone explaining, how the last steps of the image-making process are carried out. (Looking 198)

What is the process by which the organization of neural patterns becomes the image-making process, what Damasio calls the movie-in-the-brain, what Chalmers calls the consciousness of experience, what Nagel calls the subjective character of experience?

Since their emergence in the nineteenth century, the mind-brain disciplines have testified to advances made in understanding relations of mind and brain and to the power of the ongoing mystery of those relations. Writing at the cusp between the nineteenth and twentieth centuries, as an American founder and defining practitioner of those mind-brain disciplines, and as an advocate of their integration, William James writes:

[O]ur psychology will remain positivistic and non-metaphysical; and although this is certainly only a provisional halting place, and things must some day be more thoroughly thought out, we shall abide there in this book, and just as we have rejected mind-dust, we shall take no account of the soul. The spiritualistic reader may nevertheless believe in the soul if he will; whilst the positivistic one who wishes to give a tinge of mystery to the expression of his positivism can continue to say that nature in her unfathomable designs has mixed us of flame and clay, of brain and mind, that the two things hang indubitably together and determine each other’s being, but how or why no mortal may ever know. (Principles I, 182)

This is a book about that mystery—the mind—and how a set of novels tell the mind’s story.
2. THE MIND WORK OF AUSTEN, ELIOT, AND HARDY

*Imagining Minds* explores the particular contributions of Jane Austen, George Eliot, and Thomas Hardy to the writing, understanding, and experience of mind. I consider how these three English novelists who span the nineteenth century reveal in their aesthetic practices modern, post-Cartesian conceptions of the integrated mind—as cognitive, affective, embodied, and relational—together. “I think, therefore I am” becomes in their telling varying displays of “I think and feel and am embodied and am in relation to others and the world, therefore I am.” My fundamental claim is that the novel writes about the nature of mind, narrates it at work, and stimulates us to know deepened experiences of consciousness in its touching of our own integrated minds. Thinking more generally about the relationship between literature and the evolution of mind, Jonathan Bates, a Shakespeare scholar, asserts, “[L]iterature may have been genetically evolved to do cognitive work precisely by stimulating the emotions.”2 If the theories of mind generated by the mind-brain disciplines of philosophy, neurology, psychiatry, cognitive science, psychology, and psychoanalysis help explicate states of mind, the more purely cognitive mind-brain models and theories of these other disciplines cannot themselves perform what I call the novel’s more fully integrated because embodied and emotionally stimulating “mind work”—mind work that prompts us to better know our own minds. The fantasy life of Emma Woodhouse, the loss of consciousness and its return as embodied feeling in *Persuasion*, the problem of other minds and its “solution” through sound as a physiology of empathy in *Middlemarch*, the embodied mind in *Daniel Deronda*, the moods of Sue Bridehead, the dissociative waking dream states of Tess—these are the mind states I address in this book in my desire to assert that the novel narrates the integrated mind and writes experience into being.

It’s not hard to imagine that by reading Jane Austen’s novels I am

2. Emily Eakin, “I Feel Therefore I Am,” *The New York Times*, Saturday, April 19, 2003, A19. While Bates hypothesizes here about the existence and evolution of literature because of its capacities to stimulate emotion and the cognitive work that results from that stimulation, Mark Turner suggests that our minds are literary by nature—that we think in parables because of the evolutionary advantages such open-ended thinking structures engender—in his pathbreaking *The Literary Mind*. For further study on emotion and the brain, see the neuroscientist Joseph LeDoux’s important *The Emotional Brain: The Mysterious Underpinnings of Emotional Life*. For a philosophically inflected, psychoanalytic account of emotion, see Donna Orange’s *Emotional Understanding: Studies in Psychological Epistemology*. Other remarkable philosophic treatments of emotion and its relation to the arts include Sue Campbell’s *Interpreting the Personal: Expression and the Formation of Feelings*; Susan L. Feagin’s *Reading with Feeling: The Aesthetics of Appreciation*; Philip Fisher’s *The Vehement Passions*; and Martha Nussbaum’s *Upheavals of Thought: The Intelligence of Emotions*. For a literary historicist account of emotion in eighteenth- through early-nineteenth-century English thought and the verbal arts, see Adela Pinch’s *Strange Fits of Passion: Epistemologies of Emotion, Hume to Austen*. 
reading her mind. Sometimes over the course of these pages, I address the authors’ minds—as presences embodied in the words of their novels—that I imagine as I do other minds. However, novels create a felt-consciousness beyond their reflectiveness of the author’s mind. When we read a novel, we enter a world that in its verbal representations expresses multiple states and layers of subjective and intersubjective experience, mind-inflected states of consciousness to which we bring our own. “Character minds” set in relation to “context minds” (by which I mean narrative contexts that bespeak themselves as “minded beings”) are guided and defined by “narrating” and “authorial” (stated and implied) minds. Together, I would argue, these verbal subjectivities—author, character, context, narrator—create a reading experience of multiple “mindedness.” The novel is a minded world brought to consciousness through our reading minds. Meeting the mindedness of a novel happens in our understanding of and emotional identification with its narrative account of experience. When we read a narrative, we imagine we too are going through the experiences it describes because those descriptions evoke our emotions and set off the mental processing of empathy. The Austen scholar Wendy S. Jones writes, “When we respond strongly to literature, the emotional components of our neural maps become active: neurons fire along pathways within and between emotion centers of the brain, thereby altering our feelings, our thoughts, our moods—and perhaps cumulatively, our actions and characters” (338). By actuating the frontal lobes of the brain—the neuroanatomic substrates of “other minds”—the act of reading novels connects with the emotional networks in the brain. Neurologists account for our capacity to feel empathy in part through their discovery of “mirror neurons.” When we read of specific somatic and neural states that are felt by the novel’s characters, context, or author/narrator, we, too, can have those responses, similar and neural-evoked within us. Lakoff and Johnson call this mental process “enactment”:

> When we imagine seeing a scene, our visual cortex is active. When we imagine moving our bodies, the pre-motor cortex and motor cortex are active. In short, some of the same parts of our brains are active in imagining as in perceiving and doing. We will use the word *enactment* for dynamic

---

3. For an extended discussion of the relation between novel reading, empathy, and altruism, see Suzanne Keen’s fine *Empathy and the Novel*.

4. Mirror neurons have now been recorded in human beings, not only in motor regions of the brain (as expected), but as well in regions involved with vision and memory. See Christian Keysers and Valeria Gazzola’s report of Dr. Izhak Fried and Roy Mukamel’s breakthroughs of neurosurgical research in “Social Neuroscience: Mirror Neurons Recorded in Humans.” I write more about mirror neurons and their relation to empathy in my chapter on *Middlemarch*. 
brain functions shared both during perceiving and acting and during imagining. (Metaphors 257)

Novels name emotional experiences: their naming evokes their state. Reading the named emotional state, we must decode the word’s meaning, and that evokes our own associations and experiences with the word and hence its feeling. William James writes about feeling an emotion from thinking it as one of “all-overishness”: “[T]he emotion both begins and ends with what we call its effects and manifestations. It has no mental status except as either the vivid feeling of the manifestations, or the idea of them” (Principles II, 458). Reading novels leads to a feeling of “all-overishness,” to the dynamic brain function of enactment, to the firing of mirror neurons, and in turn to our understanding of and identification with their narrated experiences, experiences that become shared. We read novels for our lives—we lend to their reading our own aliveness and come away from their reading more alive. It is from this position and this understanding of the novel that I write.

Jane Austen’s work introduces to the novel sustained, self-conscious reflection on the nature of the self’s mind—the subject of Part I. If Emma in chapter 1 comes to consciousness of what it means to be self-conscious, Anne Elliot and Frederick Wentworth in chapter 2 discover what it means to return to full consciousness after knowing its early, devastating loss. In Part II, I consider how George Eliot’s writing brings to full embodiment in the novel reflections on the nature of the other’s mind. Chapter 3 explores how Dorothea, Will, Lydgate, and Caleb Garth come to “know” another through hearing and holding the other’s sounds, while Daniel Deronda in chapter 4 comes not just to know another but to imagine being another and in so doing to be (an)other. Hardy’s characters don’t just resist self-conscious thought about their own minds or the minds of others: they simply cannot, it seems, sustain or sometimes even have such thoughts. I consider in Part III how self-conscious knowledge or other-conscious knowledge in Thomas Hardy’s novels happens mostly through nonintrospective states of mind. I explore the impulses and moods of Sue Bridehead in chapter 5, and the waking dreams and other forms of dissociation of Tess in chapter 6—states that produce forms of what I’m calling nonintrospective knowing. The hard cognitive work of analysis that yields forms of knowledge in the works of Austen and Eliot essentially disappears as a mental strategy or possibility with Hardy: “I think, therefore I am” does little in Hardy’s universe to solve the problems of mind or anxieties of existence. Throughout the book I imagine the mind not as split between the conscious and unconscious, but as integrated between multiple complementary conscious and unconscious
mind states that function always and simultaneously in relation to one another. I’m interested in exploring how Hardy’s unanalyzed automatic states reveal for instance what Damasio defines as “core consciousness,” or how Eliot writes the mental processes of imagining the unimaginable, or how Austen writes the experience of what the analyst Christopher Bollas calls the “unthought known” not only as manifestations of the unconscious mind, but as integral to the mind as a whole. No one novel tells the mind’s whole story. Each chapter stands alone and can be read alone for its particular discussion of the mind’s story as told in its narrative universe. Each chapter, therefore, functions as a discrete entity, discrete in its account of the presence, forms, and methods of mind work each novel engages and creates—and yet the chapters are related. When studied together, I believe, the novels of Austen, Eliot, and Hardy help to make the idea and work of the integrated mind more apparent to us as their readers because of our discovery of the variety of different but related mind-imagining strategies, accounts of mind, and experiences of mind they represent and evoke in us as their readers.

Included here as a coda to the book is “The Neurology of Narrative,” a piece I co-authored with the neurologist Jeffrey Saver, which suggests we think in narrative because our brains are hardwired to do so, that offers some ideas about why, and that looks at autobiography in light of these claims. I began work on the relation of the mind and narrative with “The Neurology of Narrative.” Though situated at the book’s close, it was its origin: the chapters that precede the coda are the results of the thinking I’ve done since on the relations of mind and the novels of Austen, Eliot, and Hardy. While the coda is distinct in its attention to autobiographical narrative and its sustained analysis of the neurobiological underpinning of narrative in human cognition, Imagining Minds is the subject of what followed—a working-through of how to mind narrative and how to narrate the mind—call it “the neuroaesthetics of narrative and the narrative aesthetics of neurology.” Damasio presents his theory of mind in terms of a theory of narrative. He writes in Looking for Spinoza: Joy, Sorrow, and the Feeling Brain: “The mind exists for the body, is engaged in telling the story of the body’s events and uses that story to optimize the life of the organism” (206). I read these novels as individually and together telling the mind’s story, as narratives that make states of mind present to us. This is what I mean by the novel’s “mind work”—and it’s part of what narrative art, by its nature, makes. My assertion is that the novel by nature can’t help but write our embodied/feeling minds and minded/feeling bodies. One of the earliest but still foundational works of narrative theory that seeks to
understand fictional consciousness, Dorrit Cohn’s *Transparent Minds: Narrative Modes for Presenting Consciousness in Fiction*, defines the rhetorical taxonomy of its structures. And more recently, Lisa Zunshine draws on cognitive science to explore in *Why We Read Fiction: Theory of Mind and the Novel* how reading fiction trains our minds to better read the minds of others, while Alan Palmer’s *Fictional Minds* brings cognitive science to the novel to help elucidate the nature of fictional minds. I’m working on how fiction makes present the nature of our minds—our minds’ embodiments—as real minds embodied in fictional flesh. I understand these novels to reflect, enact, and present in very different ways narratives of the integrated mind. *Imagining Minds* is about my desire to understand more fully how and why that is—how the novels of Austen, Eliot, and Hardy make the reader feel his or her own experience of mind more deeply.

Spanning the English nineteenth-century literary landscape, Austen, Eliot, and Hardy write into being accounts of the self-conscious, other-conscious, and nonintrospective conscious mind, remarkable accounts of mind, in relation to which other novels (English and beyond, nineteenth-century and beyond) can be read and better understood for their mind work. So although the writings of Sir Walter Scott are not an object of my study because his texts most often keep us outside the inner workings of his characters’ minds in order to show how the conditions of a character’s life and times contribute to his or her makeup, I think we can better understand Scott’s radical break with some inherent notion of “character” by studying how far Hardy will take that radical break internally. Likewise, the particular nature of the work of the Brontës on the nature of the auto/biographical mind grows clearer by understanding their novels in relation to Austen’s defining work on the fantasizing mind and embodied feeling. And Dickens’s mysterious uses of metonymy, for instance, grow somewhat less mysterious when set in relation to Eliot’s uses of metaphor as an embodied pathway between minds. The models of mind states I describe from my readings of Austen, Eliot, and Hardy will, I hope, open the way for others to explore and expand on those models of mind with regard to the novel as a genre.

5. Predecessors of Cohn include Henry James, Mikhail Bakhtin, Wayne Booth, Franz Stanzel, and Gérard Genette.

6. Other recent studies on the relation of art/narrative/the novel to consciousness and subjectivity include Nancy Armstrong’s *How Novels Think*; George Butte’s *I Know That You Know That I Know*; William Cohen’s *Embodyed*; Gary Fireman, Ted McVay, and Owen Flanagan’s edited collection *Narrative and Consciousness*; Patrick Colm Hogan’s *Cognitive Science, Literature, and the Arts*; Jonah Lehrer’s *Proust was a Neuroscientist*; David Lodge’s *Consciousness and the Novel*; Elaine Scarry’s *Dreaming by the Book*; Gabriele Schwab’s *Subjects Without Selves*; Michael R. Trimble’s *The Soul in the Brain*; Mark Turner’s *The Literary Mind*; and James Wood’s *How Fiction Works*, to name a few.
The Integrated Mind

at large, in particular with regard to the modern novel which, with self-conscious design, makes the nature of mind its fundamental topic.

While the emergence of the minding of the nineteenth-century English novel must in ways be related to the corresponding rise and development in the nineteenth century of the mind-brain disciplines, this is not the line of argument I pursue in the book. Imagining Minds is not a work of intellectual history. Instead, it is a work of neuroaesthetics. I attribute to their pioneering work on the relation of the visual arts to the visual cortex of the neuroscientists V. S. Ramachandran, William Hirstein, and Semir Zeki the creation of this new field of inquiry. Imagining neuroaesthetics to be a study of future knowledge not just of the visual brain and the visual arts, Zeki states: “The future field of what I call neuroaesthetics will, I hope, study the neural basis of artistic creativity and achievement” (“Artistic Creativity and the Brain” 52). Imagining Minds is a response to that hope. When read in relation to the research and far-reaching, transformative accounts of the mind-brain, primarily of William James and Antonio Damasio, the novel embodies and informs through its very nature as narrative art their accounts. My fundamental claim is this: the novel is an aesthetic map to and experience of the nature of the mind-brain. The ideas and their expression of James and Damasio when set next to those of Austen, Eliot, and Hardy make evident their connection—where James and Damasio describe in ways that shift the paradigm for how we understand the nature of mental processing, the novelists in remarkably different ways bring that processing to embodied, feeling, relational narrative life. The book operates, therefore, through a principle of resonance—the principle of listening and looking for compelling resonances in language, meaning, and representation shared accounts of the


integrated mind. In the way that no one novel tells the mind’s whole story, neither does no one theory of mind-brain wholly define it. In addition to drawing throughout on the work of William James and Antonio Damasio, I turn at moments to other remarkable philosophic, psychological, physiologic, psychoanalytic, psychiatric, and neuropsychiatric perspectives to help me see and understand differently because of their different perspectives the states of mind the novels write—of George Lakoff and Mark Johnson on the embodied mind; Elaine Scarry and Jean-Paul Sartre on the literary imagination; Charles Darwin on the expression of emotion; Christopher Bollas on the transformational object; Hermann Helmholtz on the sensation of tone. Part III of Imagining Minds—on Hardy’s movement away from introspection—brings with it an accompanying movement toward the mind-brain perspectives in particular of the psychiatrist Kay Jamison on mood, the neuropsychiatrist J. Allan Hobson on dreaming, and the psychoanalysts Heinz Kohut on narcissism, Adam Phillips on kissing, and Philip Bromberg on dissociation. Feeling the exchange between what I understand to be a novel’s mindedness and my own prompted me to turn to mind-brain theorists, not because of their historical connection in time or place, but because of their compelling resonances in meaning and significance to their fields of research over time. It as well led me to seek to write a book in response to these novels that mirrors the reading experience I am having of them, meaning that is cognitive, but that is also feeling and embodied and relational. Sometimes when I read a cognitively informed approach to a literary text, the felt-quality of the reading experience of the literature is lost. In particular, when emotion is concretized into a graph of arrows and boxes, it becomes something cognitive rather than something emotional. While I don’t attempt to intuit the effects of the representations of consciousness on the reader’s mind, I do attempt in the writing of Imagining Minds to elicit the felt-quality of my reading experience in my readers—to bring to embodied, relational, feeling, and cognitive consciousness those effects on a sentence level in the reader’s mind.

Years of reading and thinking about and feeling how these novels move through me, affect me, and live in me led me to want to understand through introspection how my own sense of experience, which is to say, my own sense of self, shifted from their reading. At first I imagined I pursued this study to help me grasp how these novels display consciousness at work, but the more closely I made contact with the felt-experience of each novel, the more I began to consider the novels themselves to be the elucidators of how consciousness works. I found myself wondering again and again the kinds of questions that make this a study of neuroaesthetics: How and why does a novel have at its core what I experience as “mindedness,” or
felt-consciousness? How does that narrative consciousness address my own, enter it, change it? Is this true for all experiences of art? Is this what art does? Is this how art moves us? Or, is it particularly true of verbal narrative art because of its word-based, storytelling medium, a medium, I’m claiming, that mirrors the most central medium of our minds? The novel, the great verbal art form of the verbal mind, is for me most of all the aesthetic of consciousness, the aesthetic that tells the mind’s story. I seek to bring to consciousness how novel-imagining creates what no neuro-imaging can map—the experience of how we mind.

3. THE WORKS OF MIND OF DESCARTES, JAMES, AND DAMASIO

Why always Descartes? To think about the nature of mind, what brings me back to the Cartesian “I”? And why for others who work on the mind is there no getting away from the “cogito”? At the core of the Meditations on First Philosophy is Descartes’ central premise—the “essential self” is the mind. We are haunted by the Meditations for good reason. Our most intimate, profound, defining experience of being alive is the experience of mind. Were we not to be minded, we would not experience. “I think, therefore I am” means to Descartes “I am my experience of ‘I am’”—a mind that thinks.

Descartes’ Meditations on First Philosophy (1641) and its famous cogito ergo sum inaugurated a tradition in epistemology that understood mind split from body, and privileged mind over body, reason over emotion—a tradition that I believe continues to cast a long shadow. For me, the great nineteenth-century work on mind, William James’s The Principles of Psychology (1890), and the current research of Antonio Damasio when studied together address and seek to answer the mind/body problem with the notion of “the integrated

---

9. The historian of neuroscience Robert Young, for instance, discusses the effects of Cartesian dualism on the development of the mind sciences in Mind, Brain, and Adaptation in the Nineteenth Century when he writes, “The price paid for the scientific revolution in the physical sciences was the isolation of mind from nature and of the study of purposive behaviour from the advance of the scientific method. The fragmentation of the world into primary and secondary qualities, outer and inner, body and mind, and the exclusion of final causes from science have plagued the study of mind and behaviour at least since Descartes [ . . . ] Cartesian dualism supplied an ontological basis for the separation of mind from body, while the theory of representative perception separated the knowing mind from its external object for knowledge” (2). And other works, Descartes’ Error by the neurologist Antonio Damasio and Philosophy in the Flesh by linguist George Lakoff and philosopher Mark Johnson, are explicitly revisionist accounts of the Cartesian self and Cartesian dualism. Lakoff and Johnson begin Philosophy in the Flesh with a summary of the findings of cognitive science on the nature of mind: “The mind is inherently embodied. Thought is mostly unconscious. Abstract concepts are largely metaphorical . . . When taken together and considered in detail, these three findings from the science of mind are inconsistent with central parts of Western philosophy . . . What would happen if we started with these empirical discoveries about the nature of mind and constructed philosophy anew?” (3).
brain and mind”—embodied, feeling, and reason-making together. Simply put, the work of William James and Antonio Damasio revise the Cartesian “I.” Throughout *Imagining Minds* I integrate theories of mind with novel writings of mind. Before coming to the blended novel-theory discussions in the chapters to follow, I offer here discrete accounts of the Cartesian “I” and of the (re)visionary theories of mind of James and Damasio, to those who would find some sustained attention to their ideas, separate from the novels, beneficial.

a. “A thinking thing; that is a mind, or intellect, or reason”

Who is this Cartesian “I”? “I am sitting here near to the fire, wearing my
winter dressing gown, and I am holding this sheet of paper in my hands” (14). Such a cozy, inviting self-portrait in words of “I am my body in the world” is undone by a question. “But on what grounds could one deny that these hands and this entire body are mine?” (14). Descartes’ Meditations on First Philosophy is a work devoted to that denial, which is to say to the radical act of imagining away reality. Descartes makes the thinking away of everything about which he cannot be wholly certain in pursuit of that which he can be certain the subject of his meditations. If Descartes’ expressed desire is for the indubitable, his pathway there is through doubt, not belief. His claim at the opening of the Meditations in his letter of dedication is to prove to unbelievers that God and the soul exist. What belief cannot persuade an unbeliever to know, reason, Descartes asserts, can. And so through doubt—our rational capacity not to believe—Descartes embarks on meditations to discover what is beyond doubt.

To meditate one’s way into complete doubt sounds like a joke. Who really doubts reality? Wouldn’t believing such doubt require losing one’s mind? And it’s this—his mind—that Descartes realizes he cannot doubt away. His mind, he asserts, constitutes “mine,” that is, what enables him to know he exists. The cogito—“‘I am, I exist’ is necessarily true every time I utter it or conceive it in my mind” (18)—is for Descartes the one certain truth upon which all else rests because it is beyond doubt.

Here I make my discovery: thought exists; it alone cannot be separated from me. I am; I exist—this is certain. But for how long? For as long as I am thinking; for perhaps it could also come to pass that if I were to cease all thinking I would then utterly cease to exist—this is certain. At this time I admit nothing that is not necessarily true. I am therefore precisely nothing but a thinking thing; that is a mind, or intellect, or reason. (19)

“I am; I exist” means to Descartes, “I am thinking.” And if thinking is “I,” then “I” am my “mind, intellect, or reason,” that which for Descartes means “I, a thinking thing.” What Descartes can doubt, what is not “I am; I exist,” is his body. “I am not that concatenation of members we call the human body” (emphasis mine, 19), Descartes writes, because his body and its senses, reason tells him, can deceive him: “[A]ll these images—and, generally, everything belonging to the nature of the body—could turn out to be nothing but dreams . . . Moreover, I realize that I must be most diligent about withdrawing my mind from these things so that it can perceive its nature as distinctly as possible” (20). That he may be dreaming are the grounds on which Descartes can doubt that “these hands and this entire body are mine.”
He must work hard to draw his mind away from his body to perceive his mind as itself, as himself. If mind is “mine,” body may not be:

I know that I exist, and that at the same time I judge that obviously nothing else belongs to my nature or essence except that I am a thinking thing, I rightly conclude that my essence consists entirely in my being a thinking thing. And although perhaps (or rather, as I shall soon say, assuredly) I have a body that is very closely joined to me, nevertheless, because on the one hand I have a clear and distinct idea of myself, insofar as I am merely a thinking thing and not an extended thing, and because on the other hand I have a distinct idea of a body, insofar as it is merely an extended thing and not a thinking thing, it is certain I am really distinct from my body, and can exist without it. (Emphasis mine, 51)

Descartes’ thought experiment—“to raze everything to the ground and begin again from the original foundations . . . to establish anything firm and lasting” (17)—comes to this strange conclusion. Though “very closely joined to me,” my body is not “I.” “I,” a “thinking thing,” can exist without it. A mind split from body, a mind that can exist without a body, a mind privileged over a body—who or what would such a Descartes be? He would not be the man who sits by the fire in his dressing gown holding the sheet of paper in his hands. He would not be the man who attempts to doubt all that he once held to be certain and true. He would not be the man who discovers the certainty of his own self-conscious thought. Descartes would not be himself, would not have a human self were this description of his essential self to be true.

A disembodied self is a nonentity: the language of the Meditations reveals this. If Descartes’ thoughts experiment with an understanding of mind split from body, his language cannot. “To raze everything to the ground” or “I will apply myself earnestly and unreservedly to this general demolition of my opinions” (13) are embodied accounts of what it means to doubt and how the mind attempts to do so. To get to the idea of a disembodied truth, he uses the embodied idea of physical destruction: Descartes’ language “acts” differently than his argument does. He depends on physical language as he attempts or as the means to let go of it. From metaphors of demolition, Descartes at the end of Meditation One and beginning of Meditation Two uses similes to compare his attempt to think his way into disembodiment (“I will regard myself as not having hands, or eyes, or flesh, or blood, or senses . . . But this undertaking is arduous, and a certain laziness brings me back to my customary way of living”) to embodied states of imprisonment and drowning.
First:

I am not unlike a prisoner who enjoyed an imaginary freedom during his sleep, but, when he later begins to suspect that he is dreaming, fears being awakened and nonchalantly conspires with these pleasant illusions. In just the same way, I fall back of my own accord into my old opinions, and dread being awakened, lest the toilsome wakefulness which follows upon a pleasant rest must be spent thenceforward not in the light but among the inextricable shadows of the difficulties now brought forward. (17)

And then:

Yesterday’s meditation has thrown me into such doubts that I can no longer ignore them, yet I fail to see how they are to be resolved. It is as if I had suddenly fallen into a deep whirlpool; I am so tossed about that I can neither touch the bottom with my foot, nor swim to the top. Nevertheless I will work my way up and will once again attempt the same path I entered yesterday. (17)

Descartes does not just think doubt; he feels it and its effects through his body. His experience of doubt leads him to imagine how it resembles other states, not just of the reasoning mind, but of his whole person. The prisoner who yearns to stay asleep to feel his freedom in his dreams rather than face his harsh reality is like the Cartesian “I” who dreads waking up to this state of oppressive doubt and the shadows of uncertainty those doubts yield. The tossed-about Cartesian “I” who has suddenly fallen into a deep whirlpool and can neither touch bottom nor swim up is like the Cartesian “I” who feels thrown into such doubts that he can neither ignore them nor discern how to settle them. Descartes’ doubt, that which he calls a method of reason, depends on its embodiment in language for definition and for some disclosure of its terrifying effects on him. All of these moments reveal seemingly multiple “I’s” who are Descartes. Dubting his way to the essential “I” who thinks uncovers other “I’s” who imagine and feel. Doubt, Descartes’ language reveals, is not just a form of reason: doubt suggests how reason is linked to the imagination, the senses, and emotion.

What is not for Descartes’ argument clear and distinct—his body—is what creates clarity and distinction in Descartes’ language and, therefore, the possibility of its clarity and distinction for his readers. “Let us take, for instance, this piece of wax. It has been taken quite recently from the honeycomb, it has not yet lost all the honey flavor. It retains some of the scent of flowers from which it was collected” (21). As much as Descartes
understands the all-pervasive presence of his subjectivity—“I am a thinking mind”—to be that which is most clear and distinct because it is the “mind” beyond doubt, how much more clear and distinct is the wax to us, his readers? When Descartes meditates on the greatest of abstractions, what he calls “the idea of God,” his most abstract thought cannot abandon its embodiment: “I want to spend some time contemplating this God, to ponder his attributes and, so far as the eye of my darkened mind can take me, to gaze upon, to admire, and to adore the beauty of this immense light” (emphasis mine, 35). What is an “I am”? What is a “thinking thing”? How am I to know the Cartesian “I” who thinks? How much more easy it is for me to think of the Cartesian “I” who tastes honey and smells flowers and sees an immense light, or who imagines himself in a whirlpool when he doubts all existence, or who feels like a prisoner who dreams of freedom and wishes not to awake to his cell of doubt. What Descartes’ skepticism claims to raze—sensory knowledge—is for me what emerges as the groundwork of his argument and of my ability to imagine it and hold it in my mind. To be his mind—for himself, for me to imagine—depends on how Descartes’ mind thinks (however unacknowledged) with emotion and imagination through his senses, meaning through his body.

b. “This palpitating inward life”

William James’s The Principles of Psychology is a work so vast in scope, learning, introspection, and imagination that it must be read for itself to get a sense of its intellectual and emotional magnitude, prescience, and influence. It is to psychology what Proust’s À la recherche du temps perdu is to the novel—its magnum opus. But I can only excerpt moments to give a sense of its ideas and qualities which radically revise Descartes’ account of mind and presage many of the paths psychology, psychiatry, and neurology will eventually follow. In offering these moments, I hope to reveal something of its wide-open spaces of thought, innovation, and imagination, and how it invites us to address its words and ideas with our own experience of mind. At its opening, James reveals the intellectual design of The Principles—a working-through of one essential postulate—“The fact that the brain is the one immediate bodily condition of the mental operations is indeed so universally admitted nowadays that I need spend no more time illustrating it, but will simply postulate it and pass on. The whole remainder of the book will be more or less proof that the postulate was correct” (I, 4). James was in a unique position to draw his work from this postulate. As a
medical student, James studied neuroanatomy; *The Principles of Psychology* (based on his long course of lectures on psychology delivered at Harvard) refer throughout their pages to what was known and not known in 1890 about the human brain and nervous system. As a philosopher, James may have felt tempted to move toward what he calls the metaphysical, but he holds himself to this limit: “This book, assuming that thoughts and feelings exist and are vehicles of knowledge, thereupon contends that psychology when she has ascertained the empirical correlation of the various sorts of thought or feeling with definite conditions of the brain, can go no further—can go no farther, that is as natural science. If she goes farther she becomes metaphysical” (I, 4). Understanding our thoughts and feelings as products of a deeper source—the Soul, God—are metaphysical explanations James refuses to consider as elements of psychology. James neither models his *Principles* on Scholasticism’s turn to the Soul as a means to unify and make sense of the variety and complexity of mental phenomena nor on Associationism’s construction of a psychology without a soul “by taking discrete ‘ideas,’ faint or vivid, and showing how their cohesions, repulsions, and forms of succession, such as reminiscences, perceptions, emotions, volitions, passions, theories, and all other furnishings of an individual’s mind may be engendered. The very Self or ego of the individual comes in this way to be viewed no longer as the pre-existing source of representations, but rather as their last and most complicated fruit” (1). Neither Descartes’ reliance on God as the ultimate source of mind nor the Associationists’ (Locke, Hume, Mills, Spencer, or Bain—the reigning British philosopher-psychologists of the eighteenth to latter nineteenth century) reliance on the association of ideas as the source of mind are the theoretical frames that guide James’s work. 11 Instead, the brain and in a larger sense the body are for James the groundwork of mental states and must be studied in their relation to the mind and the mind in relation to them:

Bodily experiences, therefore, and more particularly brain-experiences, must take a place amongst those conditions of the mental life of which Psychology need take account. *The spiritualist and the associationist must both* 11. Here’s James on Spencer, for instance: “On the whole, few recent formulas have done more real service of a rough sort in psychology than the Spencerian one that the essence of mental life and bodily life are one, namely, ‘the adjustment of inner to outer relations.’ Such a formula is vagueness incarnate; but because it takes into account the fact that minds inhabit environments which act on them and on which in turn they react; because, in short, it takes mind in the midst of all its concrete relations, it is immensely more fertile than the old-fashioned ‘rational psychology,’ which treated the soul as a detached existent, sufficient unto itself, and assumed to consider only its nature and properties” (I, 6).
be “cerebralists,” to the extent at least of admitting that certain peculiarities in the way of working their own favorite principles are explicable only by the fact that the brain laws are a codeterminant of the result.

Our conclusion, then, is that a certain amount of brain-physiology must be presupposed or included in Psychology.

In still another way the psychologist is forced to be something of a nerve-physiologist. Mental phenomena are not only conditioned a parte ante by bodily processes; but they lead to them a parte post. That they lead to acts is of course the most familiar of truths, but I do not merely mean acts in the sense of voluntary and deliberate muscular performances. Mental states occasion also changes in the calibre of blood-vessels, or alteration in the heart-beats, or processes more subtle still, in glands and viscera. If these are taken into account, as well as acts which follow at some remote period because the mental state was once there, it will be safe to lay down the general law that no mental modification ever occurs which is not accompanied or followed by a bodily change. The ideas and feelings, e.g., which these present printed characters excite in the reader’s mind not only occasion movements of his eyes and nascent movements of articulation in him, but will some day make him speak, or take sides in a discussion, or give advice, or choose a book to read, differently from what would have been the case had they never impressed his retina. Our psychology must therefore take account not only of the conditions antecedent to mental states, but of their resultant consequences as well. (I, 4–5)

The general law from which The Principles of Psychology operates—“no mental modification ever occurs which is not accompanied or followed by a bodily change”—defines James’s fundamental theory of the mind as embodied because brain-based and body-based and the body as minded because mentally inflected or driven. And his description of what became my own desire to write about his work from its physical impressing on my retina—“the ideas and feelings . . . which these present printed characters excite in the reader’s mind not only occasion movements of his eyes and nascent movements of articulation in him, but will some day make him speak”—defines James’s method of bringing introspection to inspection. Observing that mental states occur simultaneously with changes in blood flow, heartbeats, glands, and viscera leads James to conclude that mental states are embodied and are forces that “live” beyond the moment of their embodiment, that they have “resultant consequences.” Further, James’s general law of the mind’s embodiment/the body’s mindedness and his method of introspection from inspection lead him to stay present to his own experience of the variety of mental states he discusses, to report them
in general and subjective terms, and to call upon his readers to do so as well:

Now can we tell more precisely in what the feeling of the central self consists? . . .

I think I can in my own case; and as what I say will be likely to meet with opposition if generalized (as indeed it may be inapplicable to other individuals), I had better continue in the first person, leaving my description to be accepted by those to whose introspection it may commend itself as true, and confessing my inability to meet the demands of others, if others there be.

I am aware of a constant play of furtherances and hindrances in my thinking, of checks and releases, tendencies which run with desire, and tendencies which run the other way. Among the matters I think of, some range themselves on the side of the thought’s interests, whilst others play an unfriendly part thereto. The mutual inconsistencies and agreements, reinforcements and obstructions, which obtain amongst those objective matters reverberate backwards and produce what seem to be incessant reactions of my spontaneity upon them, welcoming or opposing, appropriating or disowning, striving with or against, saying yes or no. This palpitating inward life is, in me, that central nucleus which I just tried to describe in terms that all men might use. (Emphasis mine, I, 299)

This description of James’s mind working on the mind—“this palpitating inward life is, in me, that central nucleus”—creates a space of mental openness and invitation. James’s mind grants to his readers as deep and as present a “central nucleus” as he does to himself, and asks his readers to reflect on their own experience of this “palpitating inward life.”

From understanding all mental states to be brain- and body-based, James derives two fundamental principles about the mind to which he returns throughout The Principles of Psychology. First: “Knowledge about a thing is knowledge of its relations. Acquaintance with it is a limitation to the bare impression it makes. Of most of its relations we are only aware in the penumbral nascent way of a fringe of unarticulated affinities about it” (emphasis mine, I, 259). The underlying assertion here is that nothing exists in isolation, separate and intact, without concrete relations. What he calls “rational psychology” “treats the soul as a detached existent, sufficient unto itself, and assumed to consider only its nature and properties” (I, 6). James’s principles of psychology understand “minds [to] inhabit environments which act on them and on which in turn they react” (I, 6). The mind for James is by nature relational and integrational—inhabiting, acting upon, and reacting to the brain, body, and world beyond the organism.
Our access to the knowledge of anything and in particular our knowledge of the mind is limited, he claims, to the “fringe of unarticulated affinities about it.” Study the brain, body, and world of the mind; only then will knowledge of the mind begin to be manifest. But to engage in that study of relations requires feeling or happens through feeling: “[F]ew writers have admitted that we cognize relations through feeling” (emphasis mine, I, 247). For James, it is the feeling of relations that enables our cognition of anything, which leads him to this second fundamental principle and revision of the Cartesian “I”:

For the central part of the Self is felt . . . it is at any rate no mere ens rationis, cognized only in an intellectual way, and no mere summation of memories or mere sound of a word in our ears. It is something with which we have a direct sensible acquaintance, and which is as fully present at any moment of consciousness in which it is present, as in a whole lifetime of such moments. When, just now, it was called an abstraction, that did not mean that, like some general notion, it could not be presented in a particular experience. It only meant that in the stream of consciousness it never was found all alone. But when it is found, it is felt; just as the body is felt, the feeling of which is also an abstraction, because never is the body felt all alone, but always together with other things. (I, 298–99)

The Jamesian “I” is not just “a thinking thing, that is a mind, or intellect, or understanding, or reason.” What is for James the central part or nucleus of the self is a found presence physically feeling in relation to other things, “something with which we have a direct sensible acquaintance,” and a presence never found all alone in the stream of consciousness, “but always together with other things.” Further, the central part of the “me,” James writes, “is the feeling of the body and of the adjustments in the head; and in the feeling of the body should be included that of the general emotional tones and tendencies, for at bottom these are but the habits in which organic activities and sensibilities run” (I, 371). In James’s telling, the “I” is not only a physically feeling presence but is as well an emotionally feeling presence. The mind for James feels emotions, comes to acquire “general emotional tones and habits,” and makes them its habits from the body’s sensorimotor responses to the object world: “Objects do excite bodily changes by a preorganized mechanism . . . the changes are so indefinitely numerous and subtle that the entire organism may be called a sounding board, which every change of consciousness, however, slight, may make reverberate” (II, 450). James’s theory of emotion, its central role in the nucleus of the self, and its very nature, follows from his understanding of
the mind as brain- and body-based—that emotion is bodily change—“Our natural way of thinking about these coarser emotions is that the mental perception of some fact excites the mental affection called the emotion, and that this latter state of mind gives rise to the bodily expression. My theory, on the contrary, is that the bodily changes follow directly the perception of the exciting fact, and that our feeling of the same changes as they occur is the emotion” (II, 449). To grant emotion not just a central part of his conception of mind, but to make emotion be a province of science, a field for future empirical study, was cause for scientific protest. James writes in The Principles that for the biologists of his day, “The desire on the part of men educated in laboratories not to have their physical reasonings mixed up with such incommensurable factors as feelings is certainly very strong . . . [F]eeling constitutes the ‘unscientific half of existence’” (emphasis mine, I, 134–37). For James to understand the “unscientific half of existence” as the essential half of existence and for him to seek to do so scientifically reveals part of what’s so astonishing about The Principles of Psychology. And for James to seek to understand the mind in relation to the brain and the body, in fact as the mental formulation of brain and body, to seek to explore the mind in relation to all its capacities, not as would a rational psychologist or philosopher as “Soul” detached and sufficient unto itself, and to understand the “unscientific half of existence”—emotion—as an essential half of consciousness and as necessary and deserving of scientific inquiry meant for James to reinvent how to study the nature of the mind and how to reimagine the mind. Working at the intellectual crossroads between medicine, philosophy, and psychology at the dawning of the twentieth century, James defines a modern account of the integrated mind-brain, as his thinking and writing embody it. The Principles of Psychology presents a remarkably original model of mind—as embodied and feeling—of a remarkably original mind. Since James, over a hundred years of advances in neuroscience have helped clarify and reveal the relations of mind and brain. However, James’s recognition of the “unscientific half of existence,” what meant for James emotion and consciousness, continued to remain outside the purview of scientific research until fairly recently. James acknowledges throughout The Principles that it would be for later researchers to elucidate how our mental structures are connected to our

12. James’s theory of emotion is often referred to as the “James-Lange theory.” James acknowledges Lange’s work in the opening pages of his chapter on emotion, cites where their theories correspond, and as well notes where their thinking diverges. James claims something of the original-author role of the theory when he writes, “Now the general causes of the emotions are indubitably physiological. Prof. C. Lange, of Copenhagen, in the pamphlet from which I quoted, published in 1885 a physiological theory of their constitution and conditioning, which I had already broached the previous year in an article in Mind” (II, 449).
nervous system and concludes this massive work of mind/on mind which seeks to define what we know about that connection with closing words about how little we know:

The causes of our mental structure are doubtless natural, and connected, like all our peculiarities, with those of our nervous system. Our interests, our tendencies of attention, our motor impulses, the aesthetic, moral, and theoretic combinations we delight in, the extent of our power of apprehending schemes of relation, just like the elementary relations themselves, time, space, difference and similarity, and the elementary kinds of feeling, have all grown up in ways of which at present we can give no account. Even in the clearest parts of Psychology our insight is insignificant enough. And the more sincerely one asks to trace the actual course of psychogenesis, the steps by which as a race we may have come by the peculiar mental attributes which we possess, the more clearly one perceives “the slowly gathering twilight close in utter night.” (Emphasis mine, II, 688)

c. “The presence of you is the feeling of what happens”

James’s “night,” what we don’t know in 1890, “the steps by which as a race we may have come by the peculiar mental attributes we possess,” Antonio Damasio’s research and theories on mind–brain integration help elucidate. Damasio summarizes an evolutionary account of how brains generally emerge from bodies, and then begins to suggest how a mind may develop from the brain:

Brains can have many intervening steps in the circuits mediating between stimulus and response, and still have no mind, if they do not meet an essential condition: the ability to display images internally and to order those images in a process called thought. (The images are not solely visual; there are also “sound images,” “olfactory images,” and so on.) My statement about behaving organisms can now be completed by saying that not all have minds, that is not all have mental phenomena (which is the same as saying that not all have cognition or cognitive processes). Some organisms have both behavior and cognition. Some have intelligent actions but no mind. No organism seems to have mind but no action.

My view then is that having a mind means that an organism forms neural representations which can become images, be manipulated in a process called thought, and eventually influence behavior by helping predict the future, plan accordingly, and choose the next action. Herein lies the
center of neurobiology as I see it: the process whereby neural representations, which consist of biological modifications created by learning in a neuron circuit, become images in our minds; the process that allows for invisible microstructural changes in neuron circuits (in cell bodies, dendrites and axons, and synapses) to become a neural representation, which in turn becomes an image we each experience as belonging to us.

To a first approximation, the overall function of the brain is to be well informed about what goes on in the rest of the body, the body proper; about what goes on in itself; and about the environment surrounding the organism, so that suitable, survivable accommodations can be achieved between organism and environment. From an evolutionary perspective, it is not the other way around. If there had been no body, there would have been no brain. (*Descartes' Error* 89–90)

What Damasio describes is an emergence of mind from body. From an evolutionary perspective, without the body there could be no mind because no brain. Single-cell organisms without brains produce behavior in response to their environment. In response to the environment and its objects and as an increasingly better response to promote survival, organisms develop brains and then minds to aid in their survival. Damasio advances his sense of how neural representations become the “images” that become thought that becomes subjectivity in his discussion of object representation:

> [C]onsider all the ingredients I have described above—an object that is being represented, an organism responding to the object of representation, and a state of the self in the process of changing because of the organism’s response to the object—are held simultaneously in working memory and attended, side-by-side or in rapid interpolation, in early sensory cortices. I propose that subjectivity emerges during the latter step when the brain is producing not just images of an object[,] not just images of organism responses to the object, but a third kind of image, that of an organism *in the act of perceiving and responding to an object*. I believe the subjective perspective arises out of the content of the third kind of image. (Emphasis mine, *Descartes' Error* 243)

Damasio proposes that subjectivity results from how the brain processes and represents the interaction of the body with object to body being changed by interaction with object. All of this unconscious processing/representing/imaging by the brain of how the body is being affected by what is outside of it becomes the groundwork for the emergence of mind. *The Feeling of What Happens: Body and Emotion in the Making of Consciousness* is Damasio’s
more sustained working-through of this hypothesis:

The sensory images of what you perceive externally, and the related images you recall, occupy most of the scope of your mind, but not all of it. Besides those images there is also this other presence that signifies you, as observer of the things imaged, owner of the things imaged, potential actor on the things imaged. There is a presence of you in a particular relationship with some object. If there were no such presence, how would your thoughts belong to you? Who could tell that they did . . . I shall propose that the simplest form of such a presence is also an image, actually the kind of image that constitutes a feeling. In that perspective, the presence of you is the feeling of what happens when your being is modified by the acts of apprehending something. The presence never quits, from the moment of awakening to the moment sleep begins. The presence must be there or there is no you. (Emphasis mine, *The Feeling* 10)

Damasio rewrites Descartes’ *cogito* as a question: “If there were no such presence, how would your thoughts belong to you?” However, the Cartesian self of a “thinking thing,” “a mind, or intellect, or reason,” in Damasio’s telling is “the feeling of what happens when your being is modified by the acts of apprehending something.” Not thought, *a priori*, separated from all else, supreme essence of what constitutes “I,” but feeling the “I” change apprehending something else—an “I” feeling in relation—is what, like James, Damasio claims defines the essential self, subjectivity. Drawing on his years of clinical research on patients with prefrontal damage, in particular on his work with his patient “Elliot,” Damasio makes scientific the importance of emotion in our understanding of being. Surviving damage to the prefrontal lobe, Elliot is no longer Elliot. Drawing perhaps most directly on the work of James, Damasio states:

I turn now to emotion and feeling, central aspects of biological regulation, to suggest they provide the bridge between rational and nonrational processes, between cortical and subcortical structures. (*Descartes’ Error* 128)

I see the *essence* of emotion as the collection of changes in body state that are induced in myriad organs by nerve cell terminals, under the control of a dedicated brain system, which is responding to the content of thoughts relative to a particular entity or event. Many of the changes in body state—those in skin color, body posture, and facial expression, for instance—are actually perceptible to an external observer. (Indeed the etymology of the word nicely suggests an external direction, from the body: *emotion* sig-
nifies literally “movement out.”) But there is more to emotion than its essence . . . I leave out of emotion the perception of all the changes that constitute the emotional response . . . I reserve the term feeling for the experience of those changes. (Emphasis mine, *Descartes’ Error* 139)

Damasio understands emotion and feeling as the bridge between rational and nonrational processes, between cortical and subcortical structures. *Descartes’ Error: Emotion, Reason, and the Human Brain; The Feeling of What Happens: Body and Emotion in the Making of Consciousness; Looking for Spinoza: Joy, Sorrow, and the Feeling Brain* are about what Damasio calls the “feeling brain,” the scientific elucidation of emotion and feeling, and the uncovering of their role in the construction and work of consciousness and culture. He writes:

> Feelings are just as cognitive as any other perceptual image, and just as dependent on cerebral-cortex processing as any other image.

To be sure, feelings are about something different. But what makes them different is that they are first and foremost about the body, that they offer us the cognition of our visceral and musculoskeletal state as it becomes affected by preorganized mechanisms and by the cognitive structures we have developed under their influence. *Feelings let us mind the body, attentively,* as during an emotional state, or faintly, as during a background state. They let us mind the body “live,” when they give us perceptual images of the body, or by “rebroadcast,” when they give us recalled images of the body state appropriate to certain circumstances, in “as if” feelings . . .

> I see feelings as having a truly privileged status . . . Because of their inextricable ties to the body, they come first in development and retain a primacy that subtly pervades our mental life. Because the brain is the body’s captive audience, feelings are winners among equals. And since what comes first constitutes a frame of reference for what comes after, feelings have a say on how the rest of the brain and cognition go about their business. (Emphasis mine, *Descartes’ Error* 158–59)

If James’s *Principles of Psychology* and Damasio’s research on the feeling brain write *why* “I feel, therefore I am,” Jane Austen, George Eliot, and Thomas Hardy write “I feel, therefore I am the mind’s story”—embodied, thinking, feeling, and relational. *Imagining Minds* is an integrational exchange on the nature of mind between six imagining minds—Jane Austen, George Eliot, and Thomas Hardy set in relation to William James, Antonio Damasio, and me. We are six minds caught, like Descartes, in a state of wonder that “I am,” six minds, like Descartes, who must find a way to express the mystery of mind.
The oral storytelling tradition of philosophy made evident by the dialogues of Socrates and parables of Plato goes underground with the writings of Aristotle. Our sense of what it means to do philosophy comes from Aristotle and his legacy, where the structure of storytelling is replaced by the construction of logical propositions, descriptions of abstractions, and assertions of general “truths.” And so what are we to make of the following?: “The more isolated I become, the more I come to like stories” (Aristotle, fragment 688). These are Aristotle’s words, Aristotle’s desire for stories. They prompt us to think of Aristotle’s story—that he has a story, that he has an autobiographical “I” that has narrated his desire for narrative as a means of lifting him out of the loneliness of what it means to be the solitary thinker who contemplates himself into the philosophical mood. Stories, it would seem, offer Aristotle comfort, call it company, or the sense that others somehow are present by virtue of what it is stories tell, or by how they tell. They as well prompt in him the reference to an “I,” an “I” who does not rise to the textual surface of his strictly philosophical writings, as in the *Ethics* or *Poetics*. What’s of particular interest to us about this fragment of Aristotle’s is the intertwining of the “I” and the stories, that they are in relation to one another, that one offers the other the chance at individual presence and mutual recognition. And we have come together in our own intertwining to begin to work through what that relation is about, or perhaps more accurately, *why* that relation is.

The parameters that define what it is narratives accomplish are too vast to disclose, though we can allude to their variety—medical histories,
legal testimonies, psychological portraits, texts of pure fiction, news stories, autobiographies, conversations. The structure of the story surfaces in positions where it both announces and is silent about its presence. When we choose to be in the company of a story by reading a novel or seeing a film, the narrative sets itself off as a narrative, not as a part of our lives; we stand in relation to it as audience to its “performance” as an aesthetic work. However, the storytelling we experience as an event in life can lose its appearance as narrative by virtue of its integration in life. So used to having conversations that function as stories are we that we lose an attention to their nature. So inescapably bound are we to consciousness that we lose sight of how consciousness most often leads us to think. While we can be trained to think in geometrical shapes, patterns of sounds, poetry, movement, syllogisms, what predominates or fundamentally constitutes our consciousness is the understanding of self and world in story. Roland Barthes in his “Introduction to the Structural Analysis of Narratives” comments first about the place of narrative within culture and then about its primacy within the self:

[N]arrative is present in every age, in every place, in every society; it begins with the very history of mankind and there nowhere is nor has been a people without narrative. All classes, all human groups, have their narratives, enjoyment of which is very often shared by men with different, even opposing, cultural backgrounds. [Barthes in footnote 1 notes that “this is not the case with either poetry or the essay, both of which are dependent on the cultural level of their consumer.”] Caring nothing for the division between good and bad literature, narrative is international, transhistorical, transcultural: it is simply there, like life itself. (Emphasis ours, 79)

Although we scarcely know more about the origins of narrative than we do about the origins of language . . . it may be significant that it is at the same moment (around the age of three) that the little human “invents” at once sentence, narrative, and the Oedipus. (124)

This movement in Barthes from his consideration of the presence of narrative within culture to his musings about the origins of narrative in the “little human” arriving simultaneously with the sentence and sexuality—or, from life as narrative to one’s life as narrative—suggests the coming to narrative is a necessary feature of human development. And to the extent that culture is human development writ large, narrative becomes an inescapable constituent of culture. Most narrative theory works to define the nature of the story—the problematics of the interactions of teller, tale, and audi-
ence, the epistemological ambiguities of the relations of the text to the “reality” to which it refers or seeks to re-present. Barthes’s nod toward the question of what the relation is between the structuring of consciousness in story to the productions of those stories as representations of self and culture takes up momentarily what is for the most part not considered. For us the question to which he alludes sounds like a series of questions: Why does the “I” tell his or her self as a story? Why does the “I” have a story to tell at all? How does the drive to narrate enable the production of autobiography, and as well dictate its form—as stories?

In his work on artificial intelligence, Roger Schank seeks to define intelligence in order to then recreate it. He asserts in *Tell Me a Story* that “storytelling and understanding are functionally the same thing” (24), that “intelligence is bound up with our ability to tell the right story at the right time” (21). Schank proposes the binding together of abilities to tell, hear, and retrieve stories appropriately, usefully, or innovatively with levels of intelligence. What enables the making of memories is, he claims, the telling of stories: “We need to tell someone else a story that describes our experience because the process of creating the story also creates the memory structure that will contain the gist of the story for the rest of our lives” (115). While we will not hold on to the words of the telling, our retention of the story’s core will make a cognitive space or an environment for thought that can be drawn upon when the gist of the story serves a new purpose. To be without stories means in Schank’s telling to be without memories; this means something like to be without a self.

Such a condition describes children before the age of three or four, who cannot remember their autobiographic experience. However, with emerging access to language that enables children to have conversations with adults about the past (and with anatomic maturation of mnestic networks) comes the ability to form and register memories. What’s at issue then is how the bringing of narrative to experience enables a sense of self founded on a series of recollections—to be without one’s stories is to be without knowledge of one’s life. While we have each experienced infancy, without our stories of it we have no access to it, no memories of it, and so on some level have had no infancy. Not all memory works toward the production of life stories: “generic memory,” or what creates the familiar through its repeated appearance, works as the background or setting for the norm against which the unfamiliar can be distinguished; “episodic memory,” that which occurs as a specific event tied to its own time and place, may be remembered if it is significant; “autobiographical memory” comes into being from out of the episodic and generic—selected incidents from the episodic become woven together to form a kind of plot set in the time and place
of the generic (Squire, Knowlton, and Musen 1993, Markowitsch 2000). It is these autobiographical memories that construct the “story of one’s life.” Episodic and generic memories are alone recalled in early childhood, on their own, but not as elements of composed stories. Words come in time to replace just the recollection of images or sound. And narrative-motivated words—meaning, on the most primitive level, words that come together to act as a story with a coherent sense of wholeness bound to a beginning, middle, and end, as a series of events situated diachronically and with referential particularity, wrapped together by a governing sense of consequence or logic, enacted by agents (the self as the primary agent or recipient of others’ agency), and structured by a discourse that defines point of view or the “how” of the telling—replace “unstoried” words.

Yet, the question still remains, why in order to have life stories must we rely on the production of narratively framed autobiographical memories? What is it about the nature of the human brain that necessitates that the memories we draw on as evidence for who we are work as narratives? For, as the psychologist Jerome Bruner in “The Narrative Construction of Reality” and the cognitive literary theorist Mark Turner in The Literary Mind assert, narrative organizes not just memory, but the whole of human experience—not just the life stories of the past, but all of one’s life as it unfolds. Bruner describes narrative as an instrument of mind that constructs our notion of reality, and asserts that the experience of life takes on meaning when we interact with it as an ongoing story, as our story.¹ But Bruner fails to address the neurobiological underpinning of the centrality of narrative in human cognition: the questions still remain, how and why does the brain cause us to experience life and our individual lives as narratives at all?

Recent advances in cognitive neuroscience suggest that the creation of narrative in the human central nervous system is mediated by a regionally distributed neural network. Fundamental components of this network include 1) the amygdala-hippocampal system, where episodic and autobiographic memories are initially arranged; 2) the left peri-Sylvian region, where language is formulated; and 3) the frontal cortices and their subcortical connections, where individual entities and events are organized into real and fictional (imagined) temporal narrative frames.

Studies employing functional imaging in normal volunteers and clinical reports assessing alterations in cognition in individuals who have suffered

focal brain injuries provide a convergent view of how the brain narratively organizes experience. To illustrate this emerging schema, we will describe and discuss four types of “dysnarrativia,” states of narrative impairment experienced by individuals with discrete focal damage in different regions of the neural network subserving human self-narrative (see table 1).

The first two types appear in individuals with global amnesia—loss of the ability to form new memories. Individuals with bilateral brain damage restricted to the amygdala-hippocampal system develop an isolated memory disturbance. Such injuries most commonly result from stroke, viral infection, or alcoholic vitamin deficiency. Amnestic patients have intact language, visuospatial, and executive function, and an intact immediate attention span. They can register and hold new ideas for 30 to 90 seconds, but no longer. Their accessible corpus of autobiographic experience is restricted to that acquired up until, or a few years before, their injury.

In recounting their autobiographic experience, most amnestic individuals provide “arrested narratives”: they are able to frame coherently their life from before their injury and not beyond, though this narrative may be 30 years out of date. Formal scientific reports, evocative “romantic science” portraits, and personal encounters with individuals with this condition unite in depicting individuals largely frozen in time, aging somatically but not psychologically (Milner, Corkin, and Teuber 1968, Ott and Saver 1993, Luria 1987, Sacks 1985). Their interests, obsessions, narrative self-interpretations, and dispositions are stable over decades.

A smaller group of amnestic individuals develop confabulation, restlessly fabricating narratives that purport to describe recent events in their lives but actually have little or no relationship to genuine occurrences. Usually these individuals have suffered, in addition to amygdala-hippocampal system damage producing amnesia, additional injury to frontal-lobe structures that are responsible for monitoring the veracity of responses and inhibiting inaccurate replies (Shapiro et al. 1981, Schnider and Ptak 1999). These individuals exhibit “unbounded narrative,” generating self-stories unconstrained (or

---

**TABLE 1. FORMS OF DYSNARRATIVIA**

<table>
<thead>
<tr>
<th>Clinical Manifestation</th>
<th>Neuroanatomic Substrate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrested narration</td>
<td>Amygdala-hippocampal system</td>
</tr>
<tr>
<td>Unbounded narration</td>
<td>Amygdala-hippocampal system plus frontal systems</td>
</tr>
<tr>
<td>Undernarration</td>
<td>Orbitofrontal cortices</td>
</tr>
<tr>
<td>Denarration</td>
<td>Dorsolateral/mesial frontal cortices</td>
</tr>
</tbody>
</table>
barely constrained) by memories of actual events. Unaware of their memory disorder, they also generally appear unaware that they are creating factitious responses to fill in memory gaps. Often within the space of a few minutes they will provide several mutually contradictory narratives in response to the same question. Confabulating amnestic individuals offer an unrivaled glimpse at the power of the human impulse to narrative. The astonishing variety of plots they create arises not from a desire to impress, entertain, instruct, or deceive, but simply from a desire to respond to another human being’s query with a story, albeit in unusual circumstances. These unique storytelling circumstances are a complete freedom to draw upon all materials for narrative content (free of limiting memories) and a willingness to accept all self-generated narratives as veridical.

A third type of dysnarrativia appears in individuals with bilateral damage to the ventromedial frontal lobe. These individuals have intact access to autobiographic memories, but are impaired at inhibiting immediate, impulsive responses. Classic case descriptions and neuropsychologic studies of these individuals suggest that they fail to construct and explore internal “as-if” narrative scenarios (Stuss and Benson 1986). They do not consider the multitude of potential outcomes of conjectured response options. They make “under-narrated” choices, often resulting in disastrous financial and social consequences. The paradigmatic patient with this disorder, Phineas Gage, was a railroad worker who survived an explosion that drove a tamping bar through his skull and brain. Following the accident, however, his personality was completely transformed, from temperate, dedicated, and religious to impulsive, vacillating, and irreverent. In his physician’s haunting phrase, “He was no longer Gage” (Harlow 1868). Defects in fictive self-narrative construction destabilize and distort the human personality.

Recent studies suggest that at least some individuals with ventromedial frontal damage suffer a different, more subtle, yet equally disabling and revealing form of undernarration. One function of the ventromedial frontal brain region is to interweave emotional limbic centers with highly abstracted and integrated information in the dorsolateral frontal area. Damage may disconnect emotional and reasoning systems. Affected individuals are able to construct abundant internal narratives regarding response options, but fail to invest the resulting scenarios with affective tone (Saver and Damasio 1991, Bechara, Damasio, and Damasio 2000). Their decision making is not guided by automatic, bodily generated, emotional markers valorizing one result over another. Their overreasoned but emotionally undernarrated choices are frequently self-deleterious.

The last form of dysnarrativia we will examine appears in moderate
form in individuals who have injury to the dorsolateral frontal cortices, and in extreme form in individuals with injury to the mesial sectors of the frontal lobe. The dorsolateral frontal cortices receive input from all higher order sensory association areas in the human cortex, and are critical for the planning and temporal organization of conduct and for guiding behavior by internal representations. Individuals with bilateral injury to this region are impaired in high-level cognitive programs that extract meaning from ongoing experience, organize the mind’s mental contents coherently, and elaborate plans for sequenced action. Their behavioral repertoire is reduced and they become apathetic, with an apparent empty indifference to events in the surround (Blumer and Benson, 1975). The mesial frontal cortices and their pallidal and other connections are crucial for generating the drive toward motion and action. Individuals with bilateral injury to this region often develop an apathetic, abulic state, a listless loss of spontaneous activity (Mega and Cohnour 1997). They are unable to provide (and likely fail to generate internally) a narrative account of their experiences, wishes, and actions, although they are fully cognizant of their visual, auditory, and tactile surround. These individuals lead “denarrated” lives, aware but failing to organize experience in an action-generating temporal frame. In the extreme, they do not speak unless spoken to and do not move unless very hungry. These patients illustrate the inseparable connection between narrativity and personhood. Brain–injured individuals may lose their linguistic, mathematic, syllogistic, visuospatial, mnestic, or kinesthetic competencies and still be recognizable the same persons. Individuals who have lost the ability to construct narrative, however, have lost their selves.

Thus, the differing ways in which the multiregional neural system subserving narrative can break down—the dysnarrativias-highlight why narrative is the fundamental mode of organizing human experience.2 Narrative

2. Determining the component operations of cognitive processes by analyzing the distinctive ways in which mental operations decompose after brain injury to discrete neural systems—the “lesion method”—is a time-honored and highly productive investigative strategy in neurology and neuropsychology. In addition to affording understanding of the neural substrates of narrative, this approach provides unique insights into the brain basis of “decoupling.” Decoupling emerged as a central theme of the “Imagination and the Adapted Mind Conference,” organized by Leda Cosmides, Paul Hernadi, and John Tooby, held at the University of California, Santa Barbara, August 26–29, 1999. Decoupling may be defined as the separation of mental action from physical action. Decoupling allows an individual to explore different response options in imagined mental scenarios without engaging the motor apparatus and actually enacting each envisioned behavior. Decoupling is clearly an evolutionarily advantageous process. Many conference participants suggested that the evolutionary origin of the human abilities to imagine and create literature and the arts may be traced to this functionally advantageous capacity.

Several neurologic illnesses produce breakdowns in the decoupling process, and help to illuminate the cognitive subcomponents of decoupling and their neural bases. We will outline a
preliminary taxonomy of disorders in the regulation of decoupling (see table 2). These disruptions may be separated into two broad classes: disruption of elements of the decoupling apparatus itself, and disorders of the frequency of activation of an intact decoupling apparatus.

### TABLE 2. DYSREGULATION OF DECOUPLING—A PRELIMINARY TAXONOMY

<table>
<thead>
<tr>
<th>Disorders Impairing Decoupling</th>
<th>Motor Output Inhibition</th>
<th>Judgement of Veridicality</th>
<th>Correct Activation of Semantic Stores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal imagination</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Dreaming</td>
<td>+</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>REM behavior disorder</td>
<td>—</td>
<td>—</td>
<td>+</td>
</tr>
<tr>
<td>Delusions</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Disorders of Frequency of Activation of Decoupling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ventromedial frontal syndromes</td>
</tr>
<tr>
<td>Obsessive–compulsive disorder/depression</td>
</tr>
</tbody>
</table>

Critical cognitive components of the decoupling apparatus include 1) inhibition of motor output in imagined scenarios, 2) judgment of veridicality (assessing whether the scenario is actually currently taking place in real life, or is an imagined past, current, or future possibility), and 3) correct activation of semantic stores and/or perception of incoming stimuli to formulate an accurate perception of real or imagined events. In normal, waking mental enactments of imagined scenarios, all three of these elements are intact. While imagining different response options to particular environmental challenges (e.g., how to escape a bear, where to go for dinner, what to say to a stranger), individuals inhibit a motor response, correctly judge that their imagined scenarios are fictive, not real, and construct scenarios that are relatively true to key features of the real-world challenge being considered.

The disorders of the decoupling apparatus include normal dreaming, the REM sleep behavior disorder, and delusional states. During REM dreaming, judgment of veridicality is often impaired and dreamers believe the dream world is a genuine reality. In normal dreaming, fortunately, the brain prevents motor enactment of actions appropriate in the dream reality but inappropriate in genuine reality through active pontine inhibition of spinal cord motor neurons, precluding motor output. In the REM sleep behavior disorder, lesions of the pons disrupt this motor inhibition, and dreamers physically enact their dreamed movements, often causing physical harm to themselves or their bed partners. In psychotic-delusional states, waking individuals form incorrect beliefs and perceptions regarding genuine reality, judge them as veridical, and act on them motorically and dysfunctionally.

Exemplars of disorders of the frequency of activation of an intact decoupling apparatus include patients with ventromedial frontal syndromes, obsessive–compulsive disorder, and depression. Some individuals with bilateral ventromedial frontal injuries become stimulus bound, reacting immediately and impulsively to environmental cues without first mentally rehearsing varying possible scenarios of response and consequence. They demonstrate underutilization of the decoupling apparatus. Conversely, individuals with obsessive–compulsive disorder and ruminative depression may repeatedly replay certain scenes in their mind, unable to detach themselves from a limited set of preoccupying scenarios of action and response. These individuals demonstrate a form of overutilization of the decoupling apparatus. Many individuals with obsessive–compulsive disorder appear on functional imaging to have overactivity of ventromedial frontal circuits, further suggesting that the ventromedial frontal region is critical for activation of decoupling.
framing of the past allows predictions of the future; generating imaginary narratives allows the individual to safely (through internal fictions) explore the varied consequences of multitudinous response options. The potent adaptive value of narrative accounts for its primacy in organizing human understanding (as opposed to pictorial, musical, kinesthetic, syllogistic, or multiple other forms). Consciousness needs a narrative structure to create a sense of self based on the features of storytelling, such as coherence, consequence, and consecution.

Studies of the forms of neurologic disintegration of human narrative capacity carry an additional important implication for interpreting autobiographic literature. These conditions reveal that narrative framing and recall of experience is a dynamic, variable, and vulnerable process. Even single individual memories are resynthesized from widely distributed components. Picturing one’s first encounter with a cat, for example, requires activating visual fragments of a feline form stored in the occipital cortex, tactile representations residing in the somatosensory cortices, audible contours of cat sounds in the auditory cortex, motoric programs for petting and carrying in the motor cortex, and often also retrieving emotional associations, metaphoric connections, and literary representations (Damasio 1989). Each of the stored components is vulnerable to change over intervening years, colored by new experience. Each act of resynthesis emphasizes different features depending on the individual’s emotional, cognitive, and social frame at the time of recall (Zola). Modern neuroscience has demonstrated that retrieving memories is not the simple act of accessing a storehouse of ready-made photos in a stable neural album, preserved with complete fidelity to the moment of their formation. Rather, each act of recall is a re-creation, drawing upon multiple, dynamically changing modular fragments to shape a new mosaic. Numerous consequences follow for literary interpretation, of which we will mention just one. All memories are suspect, at the neural level. Fidelity-stable recall and self-interpretation of the past is not a property of the human brain and mind. The varied subjectivity of literary autobiographic productions has its root in the inescapable subjectivity of the brain’s narrative and memory system. This variability of memory, however, does not detract from the primacy of narrative recall in organizing human experience. Texts that tell our “life stories,” such as autobiographies, function as the written versions of what we first did when we brought narrative language to experience orally in order to approach a coherent identity called “the self.” Not only does the activity of story production prompt, then, the production of memories, but it as well encourages an arranging of events into a state of coherence, consecution, and consequence—features of what constitute a narrative. We come to see our lives as understandable
because of their apparent integration, logic, even order: our narratives and their consequent memories tell us that our lives were so. Autobiography and its related forms exemplify the phenomenon Jerome Bruner seeks to be defined. He writes: “My objective has been merely to lay out the ground plan of narrative relations. The daunting task that remains now is to show in detail how, in particular instances, narrative organizes the structure of human experience—how, in a word, ‘life’ comes to imitate ‘art’ and vice versa” (21). The narrative art form “autobiography” instructs us in our identities by virtue of its narrative form, which it imposes as a structure and vision on our lives, and exists in the form that it does as a consequence of how our brains function. Hence, autobiography stands as an embodiment of how art imitates life and life imitates art.

The comfort Aristotle takes in stories when he feels alone finds its power perhaps in his rediscovery of a connection to himself not prompted by how he philosophizes. To desire narrative reflects a kind of fundamental desire for life and self that finds its source in our neurologic makeup. The particular drive to narrate one’s life story in the aesthetic form of autobiography reflects not only the need to create memories and so house within a notion of self formed from this collection of experiences told and in the telling remembered, but as well the need to create a notion of self that is understandable in the ways in which the narrative structure itself designs coherence. Autobiography imposes narrative’s form on the consciousness of an “I’s” experience, and exists as a consequence of how the “I’s” brain organizes experience. What then an autobiography is, how it is told, and the drive we feel toward its narration we conclude to be brain-based and deeply human.
Parts of this book have appeared elsewhere.

A portion of chapter 1 was published as “Imaginado la Coscienza di Emma” in a special issue of il cannochiale: IL VALORE COGNITIVO DELL’ARTE, edited and translated by Brunella Antomarini, 2 (2000): 157–66.

Chapter 2 was published in an earlier form as “Feeling Embodied: Consciousness, Persuasion, and Jane Austen” in Narrative (January 2003): 78–92.

A shorter version of chapter 3 was published as “Middlemarch and the Problem of Other Minds Heard” in a special issue of LIT: Literature Interpretation Theory: Victorian Realism, guest edited by Margaret E. Mitchell, 14 (2003): 223–42.


Figures 1 and 2 are reproduced here from Herman Helmholtz’s On the Sensations of Tone as a Physiological Basis of Music, translated by Alexander J. Ellis (New York: Dover Press [1954]): 136, 140.

Figures 3 and 4 are reproduced here from Wilder Penfield and Herbert Jasper’s Epilepsy and the Functional Anatomy of the Brain (Boston: Little, Brown and Co. [1954]): 70, 71.

I owe profound and ongoing thanks to my teachers—to Philip Fisher, a remarkable teacher and scholar, who taught me how to read Austen, Eliot, and Hardy and how to think about the novel; to Stanley Cavell whose voice as philosopher continues to sound within me the call to search for meaning and to give it my voice; to Martha Nussbaum who first made the relation between the novel and philosophy a necessary part of my life; to Elaine...
Scarry whose recognition of and moving attention to the representation of that which we imagine cannot be represented models for me the best of what scholarship in the humanities should seek to do; and to Jim Phelan and Peter Rabinowitz for their sustained interest in and engaged reading of my work and for bringing it to the attention of others. The Mellon Fellowship in the Humanities, what is now the Woodrow Wilson Fellowship, supported me throughout my graduate studies at Harvard—I owe my graduate education and career to their generosity and commitment to me and to the humanities. Over the course of the many years of writing this book, two intellectual homes emerged for me—the Institute of Contemporary Psychoanalysis, Los Angeles, and the Literature and Mind Initiative at the University of California, Santa Barbara. I am deeply grateful to my colleagues and friends from both worlds for sustaining me intellectually with the company of their far-reaching, generative minds and for their unfailing support. My thanks to the photographer Arash Afshari for his fine work and desire to make every image just right. Sandy Crooms, the wonderful Acquisitions Editor at The Ohio State University Press, has made every step of this book’s production easier to move through and more enjoyable than I ever could have imagined. I am grateful for her committed, positive editorial support through all stages of this book’s birth. Maggie Diehl’s and Kristen Ebert-Wagner’s skillful, gracious editorial attention has made this a better book—I am indebted to them for their knowledge of language and suggestions for how to better mine. My deep gratitude to Janna Thomspn-Chordas for the beautiful cover design and her responsive attention to my color palate and to Jennifer Shoffey Forsythe for the striking textual design. Together, they have made my book a work of art. Many thanks are due my students Erica Firman, Geoff McNeil, and Summer Star for their patient, thoughtful, careful research assistance. To Dashiell Fellini, who reminds me daily of what matters and asks like a refrain, “When will you get to work writing that bestseller?” At last I can answer, “Today.” To Nelly, thank you for your sweet face and the quiet of your company through every writing moment. I owe the greatest thanks to the brilliant neurologist-philosopher Jeffrey Saver for knowing everything and for sharing your knowledge with such profoundly moving generosity. To my mother, the artist Eleanor Young, a lifetime of thanks for showing me what it means to imagine. My first words of dedication are my last—for my father—who taught me the power and wonder of an idea.


———. The Shadow of the Object: Psychoanalysis of the Unthought Known. New York:


Keysers, Christian and Valeria Gazzola. “Social Neuroscience: Mirror Neurons
Miller, J. Hillis. Fiction and Repetition: Seven Novels. Cambridge, MA: Harvard Uni-
Bibliography


Bibliography


Sieg, Jerome M. “Why We Sleep.” *Scientific American* 289, no. 5: 92–97.


Abram, David: The Spell of the Sensuous, 121
abstractions, conceptualization of, 100
aesthetic moment, 111
affect attunement, 62
“all-overishness,” 6
amnesia, 42, 43n9; global, 189
amygdala-hippocampal system, 188–89
animal magnetism, 180–81
Aristotle, 35–36, 185, 194; De Anima, 35; Eliot and, 97; Ethics, 185; Poetics, 97, 185
Armstrong, Nancy: How Novels Think, 8n7
arrested narration, 189
artificial intelligence, 187
Ash, Mitchell G., 9n8
“as-if-body-loop,” 88, 90
Associationism, 17
attunement: affect, 62; embodied, 62
Austen, Jane: birth of, 53n2; character portraits, 41; consciousness of, 39; death of, 53, 53n2; fantasizing mind, 8; language of, 36–37; Mansfield Park, 44–45, 52n1, 55; mind work of, 4–11; narrative worlds, construction of, 43; nature of the self’s mind, 6; Northanger Abbey, 33, 43, 52n1, 55; Pride and Prejudice, 43, 52n1, 54–55, 57; self-consciousness and, 29–67; Sense and Sensibility, 43–44, 52n1, 55; “unthought known,” 7; as Wentworth, 53. See also Emma; Persuasion
“authorial” minds, 5
autobiographical memory, 187–88
autobiography, 185, 187, 193–94
Bain, Alexander, 9n8, 12n11, 17
Baker, William: George Eliot and Judaism, 118n10
Bakhtin, Mikhail, 8n6
Bally, Charles, 42n8
Bates, Jonathan, 4
Beer, Gillian: Darwin’s Plots, 76n4, 158n1
Bergson, Henri, 12n11
Birchall, Diana, 44n12
Blood, Anne: “Intensely Pleasurable Responses to Music . . . ,” 83n7
Bluestone, George, 37; consciousness of fantasy, 34; Novels into Film, 33–34
blushing, 55–56
Bollas, Christopher: aesthetic moment, 111; literary mood, 143n3, 144; The Shadow of the Object, 65n12, 144n4; transformational object, 10; “unthought known,” 7, 65
Booth, Wayne, 8n6, 45
Bray, Joseph: “The Source of Dramatized Consciousness,” 42n8
Broca, Pierre, 9n8
Bromberg, Philip: consciousness and, 145; dissociation and, 10, 179; “getting into a mood,” 144–45; the real, 161; Standing in the Spaces, 174n11
Brontë, Emily, 40
Brontë sisters, auto/biographical mind in, 8
Brown, Julia Prewitt: “Jane Austen,” 43n10
Bruner, Jerome: “The Narrative Construction of Reality,” 188, 194; Acts of Meaning, 188n1; Actual Minds, Possible Worlds, 188n1
Bunyan, John: Pilgrim’s Progress, 152n7
Butte, George: I Know That You Know That I Know, 8n7; intersubjectivity, 60; “Shame or Espousal?,” 60n8
Campbell, Sue: Interpreting the Personal, 4n2
Capuano, Peter: “The Objective Aural-Relative in Middlemarch,” 77n5
Carey, Benedict, 43n9
Cavell, Stanley, 9n8; “Knowing and Acknowledging,” 72
central nervous system, narrative and, 188–93
Cerebral cortex, 163–64
Cervantes, Miguel de, 33
Chalmers, David, 2–3; The Conscious Mind, 2n1; consciousness of experience, 3; hard vs. easy problems of consciousness, 2
“character minds” vs. “context minds,” 5
Charcot, J. M., 9n8, 12n11
children, memory and, 187
Churchland, Patricia: On the Contrary, 2n1
Churchland, Paul: Matter and Consciousness, 2n1; On the Contrary, 2n1
Clarke, Edwin, 9n8
cogito ergo sum. See “I think, therefore I am”
cognitive science, 4, 99. See also neuroscience
Cohen, William: Embodied, 8n7; “Faciality and Sensation,” 128n1
Cohn, Dorrit: Transparent Minds, 8
Coleridge, Samuel Taylor: idea of “Fancy,” 104
confabulation, 189–90
consciousness: after-thought, 139; art/narrative/the novel and, 8n7; body and, 53, 62; by nature vs. by reading, 34; coming to, 57, 58, 60, 62, 90, 136–37; core, 7, 139–41; Damasio and, 7, 25, 30–32, 45, 47, 57, 58, 128n1, 140; dramatized, 32, 41–42, 42n8, 48, 64; dreams and, 157, 175; embodied, 73; expanded, 55, 92; of experience, 3; extended, 48–49, 140; of fantasy, 34; fictional, 8; hard vs. easy problems of, 2; imagining, 34–35, 45; inescapable binding to, 186; James and, 21, 41, 128n1, 139; metamorphosis of, 108–10, 112–13, 115–16, 143; mingling of, 104, 116; multiple states of, 145; narcissistic, 50; narrative structure and, 193–94; novel as aesthetic of, 11; objective, 2; personal, 41; reality-making, 105; shame and, 55–57; simple narrative of, 47; of
Index

the social body, 85; storytelling and, 186–87, 193; subjective, 2; subjectivity and, 76; “un-thinking,” 139. See also nonintrospective consciousness; other-consciousness; self-consciousness
containment, language of, 100
core consciousness, 7, 139–41
Crick, Francis: The Astonishing Hypothesis, 2n1

Damasio, Antonio, 3, 9; “as-if-body-loop,” 88, 90; Cartesian “I,” 24; coming to consciousness, 57, 58; consciousness and, 25, 30–32, 45, 47, 57, 58, 128n1, 140; “core consciousness,” 7, 139–41; and Daniel Deronda, 105–6; Descartes’ Error, 11n10, 25, 40, 49; and Emma, 30–32, 33, 35, 36, 40, 42, 45, 47–49; emotion and, 24–25, 49; extended consciousness, 48–49, 140; “feeling brain,” 25; “feeling of knowing,” 30–31; The Feeling of What Happens, 23–25, 48, 57, 72, 93; idea-image-making, 40; image-ideas, 40; images and, 22–25, 35–36, 40, 57; “images of recall,” 35; and Jude the Obscure, 128n1, 139–41; Looking for Spinoza, 7, 25, 33, 42, 83n7, 88, 105–6; and Middlemarch, 72, 83, 88, 93; mind-brain integration, 22–25; “minding the future,” 42; mirror neurons, 88; movie-in-the-brain, 3; music and, 83n7; nonverbal narratives of representation of consciousness-making, 60; and Persuasion, 57, 58, 60; “simple narrative” of consciousness, 32, 47; subjectivity and, 23–25; works of mind of, 11–12
Dames, Nicholas: Amnesiac Selves, 9n8; The Physiology of the Novel, 9n8

Daniel Deronda (Eliot), 77n5, 94–123
aesthetic moment in, 111
Alcharisi, 115; as musician, 119
aleph-beth in, 119, 121–22
Catherine Arrowpoint, 118
British vs. Jewish plots of, 117–18
Mordecai Cohen, 112–13, 115–16, 118, 120, 122
Damasio and, 105–6
Daniel Deronda: Mordecai and, 112–13, 115–16, 118, 120, 122; consciousness of, 115; Gwendolen and, 108–12, 114–16; Jews and, 114, 116; otherness and, 6; sacred presence and, 120; sound as entrance for, 120; sympathy and, 114
embodied mind in, 4, 94–123
emotion in, 104–5
eternal sounds in, 117–23
eyes in, 110–11
felt-metaphoric exchange in, 104
Lydia Glasher: worldly desires of, 117
Henleigh Grandcourt: worldly desires of, 117
Gwendolen Harleth, 128; being of, 109; Deronda and, 108–12, 114–16; dread of attachment, 112; narcissism of, 109, 110n4; new consciousness of, 110, 112, 116; self-consciousness of, 75; self-scrutiny of, 110–112; voice of, 119; worldly desires of, 117
imagination in, 106–17
imagining the unimaginable in, 106–17
imperative “imagine” in, 106–8, 115, 118
James and, 108, 113–14, 114n7, 116
Judaism in, 113–14, 116, 118–23
Herr Klesmer, 111, 118; as musician, 119
dissociation: Bromberg and, 10, 179; in *Tess of the D’Urbervilles*, 157–83
Dixon, Thomas, 9n8
Donne, John: idea of conceit, 104
Don Quixote, 33
dramatized consciousness, 32, 41–42, 42n8, 48, 64
dreaming: consciousness and, 157, 175; Hobson and, 10, 175–77; in *Jude the Obscure*, 130, 136, 148; in *Tess of the D’Urbervilles*, 157–83
Duchenne, G. B., 9n8, 12n11
dysnarrativia, 189–93

Eliot, George: *Adam Bede*, 71, 73, 94–95, 100; consciousness of, 75, 95, 108; dismay, novels as adult expressions of, 74; embodied mind of, 94–106; epistemology and, 71; *Felix Holt*, 71; images in, 76n4, 77; imagining in, 95, 105, 106–17; imagining otherness in, 106; imagining the unimaginable, 7, 106–17; Judaism in, 118n10; metaphor, 8, 94–106; *The Mill on the Floss*, 95–100; mind work of, 4–11; mirroring as resonating, 88; nature of the other’s mind, 6; objectivity vs. subjectivity in, 76; other-consciousness and, 71–123; as philosopher, 95; physical and metaphysical worlds of, 105; realism of, 74, 76n4; reflections of mind of, 105; *Romola*, 71; search for knowledge, 71; self-consciousness and, 74; *Silas Marner*, 71; skepticism of, 74; sound and, 75–81, 95, 99, 117–23; sympathy in, 74n3, 114; translations of Spinoza, 105. See also *Daniel Deronda*; *Middlemarch*

embodied attunement, 62
embodiment, 4, 8, 10, 14, 18, 21, 139, 141; in *Daniel Deronda*, 94–123; in *Persuasion*, 51–67; in *Tess of the D’Urbervilles*, 160–63, 168–69, 179, 181

*Emma* (Austen), 29–50, 52n1, 55

aesthetic lessons of, 31
Miss Bates, as helping reader to sense Emma, 41
Frank Churchill, 38–39; language and, 39; as semantic proposition, 39
Damasio and, 30–32, 33, 35, 36, 40, 42, 45, 47–49
dramatized consciousness in, 32, 41–42, 42n8, 48
Jane Fairfax, as helping reader to sense Emma, 41
as future-tensed novel, 45
Augusta Hawkins, as helping reader to sense Emma, 41
imagination in, 29–50
imaging in, 33, 36, 38–39, 41–42, 46
James and, 35, 39–41, 43, 49
Mr. Knightley: empiricism of, 36; Harriet and, 47–49; mind work of, 36; realism of, 36; as unimaginative, 36
moral lessons of, 31
*Persuasion* compared with, 45
self-imagining and self-reflection of, 41
sensations, imaginings and words as, 39
Harriet Smith: as helping reader to sense Emma, 41; Mr. Knightley and, 47–49
Miss Taylor, 34; as helping reader to sense Emma, 41
visual particularity in, 37
Emma Woodhouse: as author and augur, 45; consciousness by nature vs. by reading, 34, 39; depictive vs. propositional representations of, 38, 41; difference between imaginary and true, inability of to discern, 46–47; extended consciousness of, 48–49; fantasy life of, 4, 32–33, 37; feeling of knowing of, 31; imagination of, 29–50; imagining consciousness of, 34–35, 45; as “imaginist,” 36–46, 48, 49; narcissism of, 35, 46; reading and, 32–36, 39, 40; self-consciousness of, 6, 34–35, 37, 41, 45, 48, 50, 180; subjectivity of, 32, 49; viewing and thinking consciousness of, 30, 32n2; world-viewing consciousness of, 32n2

emotion, 4–6, 10–11; Damasio and, 24–25, 49; in *Daniel Deronda*, 104–5; Darwin and, 10, 56; Descartes and, 15–16; James and, 20–21, 55–57; in *Jude the Obscure*, 137–48, 149, 150, 152–56; in *Middlemarch*, 82–84; neuroscience and, 190, 193; in *Persuasion*, 62, 65–66; physical enactment and, 55; in *Tess of the D’Urbervilles*, 160

empathy, 5; in *Middlemarch*, 88

“enactment,” 5

episodic memory, 187–88

experience, 2; autobiographic, 187, 189; of being alive, as experience of mind, 11; of body, 40; consciousness of, 3; of consciousness, 4; creation of, 1; dreams and, 177–78; felt-, 40, 49, 50, 53; embodied, 104, 181; emotional, 82–83, 152–54; intersubjective, 5, 80; looking-at, 89; as memory, 64; mental, physical nature of, 1; of mind, 4, 7–9, 11, 16, 31, 72–73; narrative and, 5–8, 73, 187, 189, 191, 193–94; of the other, 108; past, present, and future of, 140; phenomenology and, 172; of reading, 10; self- and other-,
Gray, Beryl: *George Eliot and Music*, 77n5
Gregory, Richard L.: *The Oxford Companion to the Mind*, 2n1

Hall, G. Stanley, 9n8
Hardy, Barbara: *Particularities*, 76n4, 108
Hardy, Thomas, 40; character in, 152–53; character, internal break with, 8; core consciousness of characters in, 140; embodiment to immaterial, travel of characters from, 181; “The Fallow Deer at the Lonely House,” 155; impulse in, 127–28; *The Mayor of Casterbridge* 127, 128–29, 139, 141, 142, 151–53, 173n10; mind work of, 4–11; nonintrospective consciousness, 6, 127–83; objects in, 134–37; reimagining in, 152; *The Return of the Native*, 144n4; temperament in, 152–54; unanalyzed automatic states, 7; un-thinking/after-thought consciousness, 139. See also *Jude the Obscure; Tess of the D’Urbervilles*

Hartman, Geoffrey, 146n6
Heaney, Seamus: “Crossings xxviii,” 178
Heaney, Seamus: “Crossings xxviii,” 178

Hegel, G. W. F.: phenomenology of spirit, 12n11
Helmholtz, Hermann, 9n8, 12n11; music vs. noise, 82, 85; *On the Sensations of Tone*, 78, 86–87; physiology of perception, 79; sensation of tone, 10, 77–79; sympathetic vibration, 77n5, 87–88
Hirstein, William, 9
Hobson, J. Allan: “activation-synthesis hypothesis,” 176; dreaming and, 10, 175–77; *The Dreaming Brain*, 175–77

of self-consciousness, 50; of self-enclosure, 95; subjective character of, 2–3, 5, 99–101, 112, 161, 172; temporal, 44; thought vs. felt-, 53; tincturing with, 160–61; visual, 75, 109; writing of into being, 4

extended consciousness, 48–49, 140

fantasy: capacity of word to create consciousness of, 34; in *Emma*, 4, 32–33; James on, 35
Feagin, Susan L.: *Reading with Feeling*, 4n2
“feeling brain,” 25
“feeling of knowing,” 30–31
Fireman, Gary: *Narrative and Consciousness*, 8n7
Fisher, Philip: *The Vehement Passions*, 4n2
Flanagan, Owen: *Narrative and Consciousness*, 8n7
Flaubert, Gustave, 40
Fletcher, Loraine: “Emma: The Shadow Novelist,” 39n7
free indirect discourse/style, 42n8
Fried, Itzhak, 5n4
Freud, Sigmund, 9n8, 12n11
frontal cortices, 188–91
Fry, Carroll: “The Hunger of the Imagination,” 30n1

Gage, Phineas, 190
Gall, Joseph, 9n8
Gallagher, Catherine: “George Eliot: Immanent Victorian,” 92n9
Gazzola, Valeria, 5n4
generic memory, 187–88
Genette, Gérard, 8n6; *Narrative Discourse*, 43n11
Gorman, Anita G.: *The Body in Illness and Health*, 56n5, 58n6
Index

Hogan, Patrick Colm: Cognitive Science, Literature, and the Arts, 8n7
Homer, 40
Hume, David, 17, 35
Husserl, Edmund: “reciprocal coexistence,” 172
hypnotic states, 180–81

“I”: Aristotelian, 185; autobiographical, 185, 187, 194; Cartesian, 11–16, 20, 24; Damasian, 24; Jamesian, 20, 24; in Persuasion, 53
idea-image-making, 40
idealizing selfobject, 169, 171
idealizing transference, 169, 171
image-ideas, 40
image-making, 3, 36, 40
imagery, mental, 37; depictive vs. propositional, 38–39
images: Bluestone and, 34; Damasio and, 22–25, 35–36, 40, 57; Eliot and, 76n4, 77; in Emma, 33; of recall, 35; Sartre and, 36–37; Scarry and, 40, 111, 177–78
imagination: Aristotle and, 35–36; auditory, Eliot and, 77n5; calculative, 36n4; in Daniel Deronda, 106–17; deliberative, 36n4; doubt, reason, and, 15; emotion and, 15–16; in Emma, 29–50; literary, 10, 36–37, 40; memory and, 43n9; productive, 35; reason and, 30n1; sensitive, 36n4
“Imagination and the Adapted Mind Conference,” 191n2
“imagine,” imperative, in Daniel Deronda, 106–8, 115, 118
imagining: away reality, 13; of consciousness, 34–35, 45; Descartes and, 16; Eliot and, 95, 105, 106–17; in Emma, 33, 36, 38–39, 41–42, 46; James and, 43; mental, 38; otherness, 108, 109; of time, Austen and, 43n9; in Tess of the D’Urbervilles, 168; the unimaginable, 7, 106–17, 130
imaginist, Emma as, 36–46, 48, 49
intersubjectivity, 5, 104–5; Butte and, 60; in Middlemarch, 71n1, 80; in Tess of the D’Urbervilles, 172–73
“Isakower’s phenomenon,” 170
“I think, therefore I am” (cogito ergo sum: Descartes), 4, 6, 11, 24, 42, 172

Jackson, J. H., 9n8, 12n11
Jacyna, L. S., 9n8
James, Henry, 8n6
James, Susan: Passion and Action, 105n1
James, William, 3, 9, 9n8, 12n11, 79, 88, 100, 128n1, 129, 142–43; “all-overishness,” 6; body and, 114n7; characters of thought, 41; “conception,” 40; consciousness and, 21, 41, 128n1, 139; consciousness as physical process, 139; “The Consciousness of Self,” 39–40; and Daniel Deronda, 108, 113–14, 114n7, 116; and Emma, 35, 39–41, 43, 49; emotionally feeling presence, 20; emotions and, 20–21, 55–57; “Emotions,” 55; essential nature of consciousness, 139; fantasy and, 35; hypnotic states and, 180–81; “Imagination,” 108; imagining and, 43; impulse and, 127, 134; introspection and inspection, 18; Jamesian “I,” 20, 24; and Jude the Obscure, 127–28, 128n1, 129, 134, 135, 139, 142–43; knowing vs. feeling, 49; and Middlemarch, 71, 79, 83, 88; music and, 83; noticing and, 135; “The Perception of Time,” 43; and Persuasion, 55–57, 62; The Principles of Psychology, 11–12, 16–22, 25, 39–40, 43, 55, 71, 127–28; “productive imagination” and, 35; real-
ity and, 113–14, 116; “Sensations,” 62; solitude as source of terror to infancy, 74; “subject of discourse,” 40; and *Tess of the D’Urbervilles*, 180–81; “Will,” 134; works of mind of, 11–12, 16–22

James-Lange theory, 21n13, 55n4

Jamison, Kay Redfield: *Exuberance*, 145, 153; mood and, 10; mood disorders and, 145; *Night Falls Fast*, 145; personality and, 153; *Touched with Fire*, 145, 147, 150; *An Unquiet Mind*, 145, 150


Johnson, Mark, 5–6, 98, 99–100; embodied mind, 10; *Metaphors We Live By*, 5–6, 98, 101; *Philosophy in the Flesh*, 11n10, 99–100

Johnson, Samuel, 47

Jones, Wendy S., 5; “*Emma, Gender, and the Mind-Brain*,” 30n1

*Journal of Consciousness Studies*, 2n1

*Jude the Obscure* (Hardy), 127–56

as anti-Bildungsroman, 131
as anti-English novel, 131
as anti-marriage novel, 130–31
as Bildungsroman, 131, 149

Sue Bridehead: aliveness of, 142, 148; autobiography, absence of, 140; civilization and, 137–38; core consciousness of, 141; dreams of, 130; as emotional, 142–43; extended consciousness, absence of, 140; identity of, 132; impulse of, 127–28, 141; inhibition of impulse, 132; Jude and, 133, 137, 138, 141, 142, 146, 149, 154; marriage and, 140; mood of, 4, 6, 143–48; mood disorder and, 145, 147; as more unconscious than conscious, 139; nature of mind of, 140; Phillotson and, 129–31, 134, 138, 141, 142; as relational, 142; voice of, 146n6; window-jumping of, 127–30

Christminster, 132, 136–37, 149

Damasio and, 128n1, 139–41

Arabella Donn, 130–31, 142, 154

emotions in, 137–48, 149, 150, 152–56

as empty book, 149

Jude Fawley, 127–28; crushing of, 148–49; dreams of, 136, 148; fate of, 151; melancholy mood of, 150–51; mood and, 144; obscurity of, 148–49, 151, 154; Phillotson and, 136–37, 141, 148; power of to feel, 149; Sue and, 133, 137, 138, 141, 142, 146, 149, 154; tone of mind of, 148–56

hell of conscious failure in, 151, 155

hypomania in, 145, 147

impulse in, 127–28

impulses of will in, 130–37

James and, 127–28, 128n1, 129, 134, 135, 139, 142–43

Little Father Time, 154

manic depression in, 150

mood in, 127–56

mood disorder in, 145, 147

objects in, 134–37, 148

Richard Phillotson: Jude and, 136–37, 141, 148; self-conception of, 139; Sue and, 129–31, 134, 138, 141, 142

window as boundary in, 133

window-jumping in, 127–30

women, role of, 130–31

Keen, Suzanne: *Empathy and the Novel*, 5n3

Keysers, Christian, 5n4

kissing: Philips and, 10, 163, 166, 168, 171; in *Tess of the*
Index

D’Urbervilles, 163–74
Kohut, Heinz: idealizing transfer-
ence, 169; narcissism and, 10, 169, 171; object hunger, 169–70; “The
Psychoanalytic Treatment of Nar-
cissistic Personality Disorders,” 169
Kosslyn, Stephen, 37; The Case for
Mental Imagery, 37–38
Kris teva, Julia: Black Sun, 151

Lakoff, George, 5–6, 98, 99–100;
embodied mind, 10; Metaphors We
Live By, 5–6, 98, 101; Philosophy in
the Flesh, 11n10, 99–100
Lange, Carl, 21n13, 55n4
Langer, Susanne, 81–82; Feeling and
Form, 82–83; Philosophy in a New
Key, 82
Law, Jules: “Sleeping Figures,” 160
Leavis, F. R., 42n8
LeDoux, Joseph: The Emotional
Brain, 4n2
Lehrer, Jonah: Proust was a Neurosci-
entist, 8n7
Lerner, Alan: My Fair Lady, 167n6
Levine, George: The Realistic Imagi-
nation, 76n4
Lewes, George, 9n8, 12n11, 78
literary imagination, 10, 36–37, 40
Locke, John, 17
Lodge, David: Consciousness and the
Novel, 8n7
Loewe, Frederick: My Fair Lady,
167n6

Madame Bovary, 33
Mandel, Miriam B.: “Fiction and
Fiction-Making,” 39n7, 42n8
Marroni, Francesco, 144n4
Marx, Karl: economic theories,
12n11
McGinn, Colin: The Mysterious
Flame, 2n1

McMaster, Juliet: “Emma,” 30n1
McVay, Ted: Narrative and Consci-
ousness, 8n7
memory: autobiographical, 187–88;
episodic, 187–88; generic, 187–88;
in Mansfield Park, 44–45; neurosci-
ence of, 42–43, 188–94; storytelling
and, 187–88
mental imagery, depictive vs. proposi-
tional, 38–39
mental retina, 110–11

Merle-Ponty, Maurice: Phenomenol-
ogy of Perception, 12n11, 60n8
metamorphosis of consciousness,
108–10, 112–13, 115–16, 143
metaphor: in Adam Bede, 95; in Dan-
iel Deronda, 95, 101–6; in Eliot, 8,
94–106; in The Mill on the Floss,
95–100; recording of, 101–4
Middlemarch (Eliot), 71–93
being and resonance in, 91–93
Dorothea Brooke, 75, 81, 89–91;
aliveness of, 81, 91; conscious-
ness of, 92; voice of, 81–85, 90
Nicholas Bulstrode, 75; narcissism
of, 79–80
Eleanor Cadwallader, 76
Edward Casaubon: death of, 89;
“key to all mythology,” 12n11;
narcissism of, 79–80; power of
metaphor and, 95
Damasio and, 72, 83, 88, 93
emotion in, 82–84
empathy in, 88
Caleb Garth: Dorothea’s voice
and, 82, 84–85; labor as con-
sciousness of social body, 85;
music of labor, 85, 88
intersubjectivity in, 71n1, 80
James and, 71, 79, 83, 88
Will Ladislaw, 75, 91–92; Doro-
thea’s voice and, 81–82, 84, 90
Tertius Lydgate, 75–76, 81, 89;
narcissism of, 90–91; Doro-
thea’s voice and, 84, 90
metaphors in, 75–77
microscope, use of in, 75–76
music in, 75–91
narcissism in, 79–80
Adolf Naumann, 81
pain in, 72, 81, 88–93
problem of other minds in, 4, 6, 71–93
sound in, 75–81, 95, 99
sympathetic vibration in, 81–91
Fred Vincy, 75, 88, 144; consciousness of, 85
Rosamond Vincy, 75, 81, 89; narcissism of, 79–80
Miller, Andrew H.: “Reading Thoughts,” 9n8
Miller, J. Hillis, 74–75; Distance and Desire, 128n1, 135; Fiction and Repetition, 158n1; “immanent design,” 158n1; Others, 74n2; “The Roar on the Other Side of Silence,” 74n2
Miller, Susan M., 155
Mills, James, 17
mind-brain disciplines, 3, 4, 9, 10
mind-brain integration: Damasio and, 22–25; James and, 21
“minded beings,” 5
mindedness, 7, 10–11, 18; in Hardy, 128n1; multiple, 5
“minding the future,” 42
mind-imagining strategies, 7
Minter, David Lee: “Aesthetic Vision and the World of Emma,” 39n7
mirror neurons, 5–6, 88
Modell, Arnold H.: Imagination and the Meaningful Brain, 36n4
mood: Jamison and, 10; in Jude the Obscure, 127–56; literary, 143
Moore, Barbara: “Imagining the Real,” 30n1
Moretti, Franco: “Kindergarten,” 181n13
Mukamel, Roy, 5n4
music, in Middlemarch, 75–91
“The Music of Nature and the Nature of Music” (Gray et al.), 83
Mysteries of Udolpho, The, 33, 43

Nagel, Thomas, 1–2, 3, 97–98; subjective character of experience, 3; The View from Nowhere, 2n1; “What is it like to be a Bat?,” 1, 97, 113
narcissism: in Daniel Deronda, 109, 110n4; in Emma, 35, 46; Kohut and, 10, 169, 171; in Tess of the D’Urbervilles, 169–71
“narrating” minds, 5
narrative: arrested, 189; central nervous system and, 188–93; coming to as necessary feature of human development, 186; experience and, 5–8, 73, 187, 189, 191, 193–94; as inescapable constituent of culture, 186; life as vs. one’s life as, 186; minds as, 73; neurology of, 185–94; as organizing memory and human experience, 188; self-, 79; self-consciousness and, 45; simple, 32, 47; unbounded, 189–90; wordless/nonverbal, 57, 60
narrative language, mind and, 33, 40
narrative theory, 8
neuroaesthetics, 9, 10–11
neuroanatomy, 17
neurology, 4, 16; of narrative, 185–94
neuropsychiatry, 10
neurosciences, 2; cognitive, 188; memory and, 42–43, 188–94
neurosis, 180
Newton, K. M.: George Eliot, Judaism and the Novels, 118n10
nonintrospective consciousness, Hardy and, 6, 127–83
novels: as an aesthetic form, 152; as aesthetic maps to and experience of the nature of the mind-brain, 9; “all-overshiness” and, 6; capacity of to write inwardness, 37;
felt-consciousness and, 5; imagining and, 36, 107; insufficiency of narrating consciousness, 45; mindedness of, 10–11; as naming emotional experiences, 6; nature of mind and, 4, 10, 33–34

Damasio and, 57, 58, 60
disembodiment in, 57–60

Anne Elliot: attachment of, 59, 64, 66; awakening to being, 62; “bloom” of, 58–60, 63; body of, 57–60, 63; consciousness of, 6, 59–60, 62; feeling of knowing of, 58; happiness of, 56; mother of, 58–59, 63; as nonobject to Sir Walter and Elizabeth, 58; “retrenchment of being,” 59; Wentworth and, 59, 60–64, 66

embodiment in, 51–67
emotion in, 62, 65–66

Emma compared with, 45
Fanny Harville, 65–66
feeling of knowing in, 54–57, 58
“I” in, 53
James and, 55–57, 62
loss of consciousness in, 4
metaphor in, 53
Louisa Musgrove, fall of, 64–65
pain in, 62, 67

Pride and Prejudice compared with, 54–55
Lady Russell, 59
self-consciousness in, 67
sensation in, 60–66
“true attachment and constancy” of women speech, 65

Frederick Wentworth: attachment of, 64–65, 66; body that feels vs. consciousness that feels, 53; consciousness of, 6, 59, 60, 63–65; Anne Elliot and, 59, 60–64, 66; letter of, 51–54; “unthought known,” 65; wordlessness of, 61, 62
women as perceivable in, 58

phenomenology, 60n8, 172

Phillips, Adam: kissing and, 10, 163, 166, 168, 171; narcissism and, 168–69; “Plotting for Kisses,” 163
physical orientation, 100
Piaget, Jean: *The Principles of Genetic Epistemology*, 47
Picker, John: *Victorian Soundscapes*, 77n5
Pinch, Adela: *Strange Fits of Passion*, 4n2
Pinker, Steven: *How the Mind Works*, 2n1
Plato, 185
point of view, mind and, 2
Polanyi, Michael: *Personal Knowledge*, 65n12
“productive imagination,” 35
Proust, Marcel: *A la recherche du temps perdu*, 16
psychiatry, 10, 16
psychoanalysis, 4, 9n8, 10, 179
psychology, 4, 10, 16–22; temperament and, 153–54
“radiant ignition,” 40
Ramachandran, V. S., 9
Raphael, Linda: *Narrative Skepticism*, 53n2, 74n2, 105n1
reading: act of, 4–6, 8, 10, 36, 40, 41; in *Emma*, 32–36, 39
reimagining, Hardy and, 152
Richardson, Alan: *British Romanticism and the Science of the Mind*, 9n8; *The Neural Sublime*, 9n8; “Of Heartache and Head Injury,” 64n11
Rose, David: *Consciousness*, 2n1
Rylance, Rick, 9n8
Sartre, Jean-Paul: images and, 36–37; literary imagination, 10, 36–37, 40; *The Psychology of Imagination*, 36
Saver, Jeffrey (and Kay Young): *The Neurology of Narrative*, 185–94
Scarry, Elaine: *Dreaming by the Book*, 8n7, 40, 107, 110–11, 177–78; images and, 40, 111, 178; literary imagination, 10; mental retina, 110–11; “radiant ignition,” 40
Schank, Roger: *Tell Me a Story*, 187
Scholasticism, 17
Schopenhauer, Arthur: *Die Welt als Wille und Vorsetzung*, 77n5
Schwab, Gabriele: “Words and Moods,” 143, 146n6; *Subjects Without Selves*, 8n7
Scott, Sir Walter, 8
self, redefinitions of, 33
self-consciousness: Austen and, 6, 29–67; in *Daniel Deronda*, 75, 107; Eliot and, 74; in *Emma*, 6, 34–35, 37, 41, 45, 48, 50, 180; Hardy and, 6, 8; in *Persuasion*, 57, 67
self-reflection: in *Daniel Deronda*, 100; dissociation and, 179; in *Emma*, 41–42
sensorimotor processing, 100
shame: in Austen’s women protagonists, 50, 55–56; in *Emma*, 48, 50; in *Persuasion*, 57
Shema, 123
skepticism: Descartes’, 71–72
Socrates, 185
Spencer, Herbert, 9n8, 12n11, 17; William James on, 17n12
Sperling, Tom: “‘The Sensitive Author,’” 74n3
Spinoza, Benedict de: Eliot’s translations of, 105; *Ethics*, 12n11, 105–6; *Tractatus theologico-politicus*, 105
Stenzel, Franz, 8n6
Stern, Daniel: affect attunement, 62;
*Diary of a Baby*, 109–10; *The Interpersonal World of the Infant*, 62n9
storytelling, 185–86; consciousness and, 193–94; memory and, 187–88. See also narrative
subjectivity, 2, 16, 172; art/narrative/ the novel and, 8n7; autobiography and, 193; Damasio and, 23–25; in
Index

Daniel Deronda, 112; in Emma, 32, 49; in Middlemarch, 76; in Tess of the D’Urbervilles, 172–73; verbal, 5
“subject of discourse,” 40
suggestion, 180
sympathetic vibration, in Middlemarch, 77n5, 81–91

Tave, Stuart: Some Words of Jane Austen, 39n7, 46–47
Tess of the D’Urbervilles (Hardy), 157–83
as Bildungsroman, 159
circularity in, 158–60
Angel Clare: abandonment of Tess, 170–71; failure to hear Tess, 172–73; music of, 162; Tess and, 161–62, 167–69, 182
continuity vs. discontinuity in, 176
daydreaming in, 157, 176–82
dissociation in, 157–83
dreams in, 157–83
Tess Durbeyfield: abandonment of by Angel, 170–71; absolute mental liberty of, 179; Alec and, 166–69, 181; aliveness of, 161, 163, 168, 174, 178; animal magnetism and, 180–81; Angel and, 161–62, 167–69; disembodiment of, 179; dissociative waking dream states of, 4, 6, 176–81; dreaming wakefulness of, 177–81; as embodiment of embodiment, 141; evolutionary paths of, 159–60; evolution of from maidenhood, 174–76; falls of, 178, 181; half-states of, 177–81; as Hardy’s embodiment of life force that is Female, 161; hypnoid states of, 177–81; love and, 172; mouth of, 166–68, 181–82; rape of, 127, 170, 174, 175; sleep and, 175–77, 180, 182
emotion in, 160
escape in, 174–81
fecundity in, 161–63
future-directed feelings, 182
horse-riding as metonym for sex in, 167n5
idealizing selfobject in, 169, 171
idealizing transference in, 169, 171
imagining in, 168
intersubjectivity in, 172–73
James and, 180–81
kissing in, 163–74
milking in, 161–63
narcissism in, 169–71
as novel of evolutionary metamorphosis, 158–60, 176
“O,” 158–60, 173
object hunger in, 169–70
sleep in, 157, 175–77
Sorrow, death of, 174
Alec Stoke-D’Urberville: desire for Tess, 166–69, 182; failure to hear Tess, 172–73; narcissism of, 170; object hunger of, 170; rape of Tess, 170
subjectivity in, 172–73
tincture in, 161–63
trauma in, 174, 181
Thrailkill, Jane F.: Affecting Fictions, 9n8
Tolstoy, Leo, 40
Tomalin, Claire: Jane Austen, 53nn2–3
tone, sensation of, 10
Tononi, Giulio: A Universe of Consciousness, 2n1
Tramo, Mark Jude, 78
transformational object: Bollas and, 10
Trimble, Michael R.: The Soul in the Brain, 8n7
Trugman, Rabbi Avraham Arieh: The
Index

Alef-Beit, 119–20
Turner, Mark: The Literary Mind, 4n2, 8n7, 188

unbounded narration, 189–90
undernarration, 189–90
“unthought known,” 7, 65

verbal subjectivities, 5
Von Hartmann, Eduard, 12n11

Wiltshire, John, 65
Wisnesky, Rabbi Moshe Yaakov: The Alef-Beit, 119–20
Wittgenstein, Ludwig: The Philosophical Investigations, 64n10
Wood, James, 37; How Fiction Works, 8n7, 152n7; novelistic characteriza-
tion, 152n6
Woodward, William R., 9n8
Wundt, Wilhelm, 9n8, 12n11

Young, Kay (and Jeffrey Saver): The Neurology of Narrative, 185–94
Young, Robert, 9n8; Mind, Brain and Adaptation in the Nineteenth Century, 11n10

Zahavi, Dan: “Beyond Empathy,” 172
Zatorre, Robert: “Intensely Pleasurable Responses to Music . . . ,” 83n7
Zeki, Semir, 9
Zeman, Adam: Consciousness, 2n1
Zunshine, Lisa: Why We Read Fiction, 8
The series editors believe that the most significant work in narrative studies today contributes both to our knowledge of specific narratives and to our understanding of narrative in general. Studies in the series typically offer interpretations of individual narratives and address significant theoretical issues underlying those interpretations. The series does not privilege one critical perspective but is open to work from any strong theoretical position.

Techniques for Living: Fiction and Theory in the Work of Christine Brooke-Rose
  Karen R. Lawrence

Towards the Ethics of Form in Fiction: Narratives of Cultural Remission
  Leona Toker

Tabloid, Inc.: Crimes, Newspapers, Narratives
  V. Penelope Pelizzon and Nancy M. West

Narrative Means, Lyric Ends: Temporality in the Nineteenth-Century British Long Poem
  Monique R. Morgan

Understanding Nationalism: On Narrative, Cognitive Science, and Identity
  Patrick Colm Hogan

Joseph Conrad: Voice, Sequence, History, Genre
  Edited by Jakob Lothe, Jeremy Hawthorn, James Phelan

The Rhetoric of Fictionality: Narrative Theory and the Idea of Fiction
  Richard Walsh

Experiencing Fiction: Judgments, Progressions, and the Rhetorical Theory of Narrative
  James Phelan

Unnatural Voices: Extreme Narration in Modern and Contemporary Fiction
  Brian Richardson

Narrative Causalities
  Emma Kafalenos

Why We Read Fiction: Theory of Mind and the Novel
  Lisa Zunshine

I Know That You Know That I Know: Narrating Subjects from Moll Flanders to Marnie
  George Butte

Bloodscripts: Writing the Violent Subject
  Elana Gomel

Surprised by Shame: Dostoevsky’s Liars and Narrative Exposure
  Deborah A. Martinsen

Having a Good Cry: Effeminate Feelings and Pop-Culture Forms
  Robyn R. Warhol

Politics, Persuasion, and Pragmatism: A Rhetoric of Feminist Utopian Fiction
  Ellen Peel