Introduction: Cognitive Literary Studies and the Well-Lived Life

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Abstract In what ways does literary study contribute to human knowledge, understanding, and flourishing? This introductory essay emphasizes the importance of an age-old question in the face of the devaluation of the humanities. Cognitive literary studies are well situated to address the ethical and pedagogical functions of literature. Broadly contextualizing the issue's contributions within literary and cognitive theory, the essay describes their various explorations of reader processing and ethical involvement, including personal, social, and environmental improvement.

Keywords aesthetics, cognition, ethics, literature, neuroscience

In the wake of the Enlightenment and Industrial Revolution, arguments in defense of the humanities emerged as a response to the twin movements of the ascendance of science and the reconceptualization of higher education in line with new disciplines. But to this day, champions of the humanities are generally long on rhetoric rather than evidence.[1] Nonetheless, in literary studies particularly, scholars are exhibiting increasing interest in the processes of reading and imagining and the effects of both.[2] Cognitive literary studies

1. See, for instance, Helen Small's (2003) *The Value of the Humanities*, a primarily historical account, and Joshua Landy's (2012) *How to Do Things with Fictions*, which posits the salutary effect of engagement with aesthetic form.

2. In his recent book on reader processing, *The Gist of Reading*, literary scholar Andrew Elfenbein (2018: 100) explains the complexity of reading processes and concept activation as well as the difference between novice and skilled readers. Skilled or expert readers develop metacognitive

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occupy a special position in the debates over the purpose of higher education and the value of the humanities: through their varied interdisciplinary commitments, cognitive literary studies, including cognitive theater and film studies, seek to discover the processes, forms of knowledge, and ethical function of literary experience in its several modes—reading, viewing, contemplation, discussion, and analysis. If scholars wish to argue that the humanities are not a trivial pursuit, then they can best make their case by theorizing and, where possible, documenting the dynamic interactions of individuals, groups, texts, and environments that cumulatively produce the forms of knowledge specific to aesthetic engagement.

Whereas some research in this growing subdiscipline employs scientific methodology in efforts to determine, for example, the impact of reading on social awareness or critical thinking, other projects in the field are synthetic, bringing together cognitive science with literature and disparate disciplines as an interpretive and pedagogical tool. Through their application of psychology to literature and literary theory, the essays in this special issue explore the capacity of the literary humanities to enhance thought and action, whether through scholarship, teaching, mental flexibility, or human well-being.

This special issue was inspired not only by the general crisis in higher education, but, more specifically, by the conference *Why the Humanities: Answers from the Cognitive and Neurosciences*, which took place at Kent State University in July 2015. The conference was instrumental in bringing together psychologists and literary scholars with the shared goal of demonstrating the epistemic, ethical, and affective benefits of the humanities, and in so doing promoting the efficacy of cognitive perspectives for humanities scholarship, educational practice, and social awareness. Among the humanities, literary studies were especially well represented at the conference. Pursuing the same end, this issue presents ten essays by fourteen contributors, a few of whom attended the Kent State conference. Hailing from the fields of psychology, communications, and literary studies, these scholars represent diverse methodologies and a range of cognitive specializations, including empirical reading studies, empathy, neurophenomenology, and mindfulness psychology. They likewise explore varied literary areas, among them narratology, romantic drama, film, African American literature, ecocriticism, and meditative poetry. The essays are organized into three sections, though there is considerable overlap among them. Section 1 emphasizes reader processing and

awareness, which enables them to shift strategies during reading, a finding that has broad implications for literary pedagogy and the broad cognitive skills resulting therefrom. Like Donald's (2001) account of the evolutionary emergence and functioning human consciousness, Elfenbein's account of reading points to the rapidity of habituation in humans.

psychology; section 2 focuses on the empathy and ethics of human individuals and social groups; and section 3 addresses considerations of ethical well-being, including the nonhuman natural environment, other species, and the centered, integrated self.

For the better part of three decades, *Poetics Today* has been at the forefront of cognitive literary studies. Over those decades, the editors have regularly published not only a wealth of individual essays in the field but also numerous special issues devoted to its evolving perspectives. Other journals have rather more recently and cautiously opened up to scholarship crossing the science-humanities divide. Knowledge is a cumulative process, and one goal of this issue is to contribute new research and additional voices to this increasingly sophisticated conversation. Yet another is to embrace and strengthen the exchange between the social and hard sciences and literary scholars. This interaction presses us to consider the perspectives and concepts of our several disciplines, and therefore both furthers knowledge through cooperation and promotes a vital self-critical function. As Vittorio Gallese (in Wojciehowski 2011) notes, "Whenever people talk of multi- or interdisciplinarity, the first problem to be solved is the language, the linguistic barrier, and the jargons we employ. Often we use the same words but with totally different implications."

Last but not least, the collection foregrounds the means by which, through their particular manner of educating, aesthetic engagements may enhance human ethics. As Anthony Kwame Appiah (2008: 164) reminds us, "Ethics is, in that formulation of Aristotle's, about the ultimate aim or end of human life, the end he called *eudaimonia* [human flourishing]." It is not, on this account, simply subjective contentment but the life lived well that constitutes ethics, and like Appiah, the contributors here believe that literature has a role in this pursuit.

1. Reader Processing and Psychology

The essays in the first section draw on neuroscience and empirical studies to investigate reader processing and the consequent effects on cognition, understood as a combination of intellection and emotion. In the wake of second-generation cognitive science, cognitive literary studies has enjoyed a generalized shift away from a first-generation mind-as-machine approach to narrative and reader theory, largely embracing the mind's embodiment—that is, the inextricable links among ratiocination, emotion, memory, physical sensation, physiology, and the material and social surround.[3] To varying

3. As Jerome Bruner (1990: 1–11) explains, the cognitive revolution, which sought to place meaning and interpretation at the heart of psychology, was a proposed remedy to behavior-

degrees, those in the subdiscipline also acknowledge the evolved basis of such embedded cognition and its ubiquitously functional sociocultural dimension. Today, this viewpoint is dubbed "enactivist"; in fact, it has a long history beginning in nineteenth- and twentieth-century intellectual developments including evolutionary theory, pragmatic philosophy, and ecological psychology.[4] While at the theoretical level cognitive literary scholars and narratologists have shifted promptly away from a computer model of the mind to an enactivist perspective, frank assessment of existing literary theoretical models of reading and narrative influenced by the machine metaphor of the brain-mind is still ongoing. The essays in this group, then, underscore the need to reevaluate logically conceptualized paradigms that are often unidirectional and hierarchical; to define the terms applied to processes precisely and clearly; and to align the concepts of psychology and literary studies.

In the first paper, "Neuroscience, Narrative, and Narratology," Paul B. Armstrong addresses directly the mismatch between structuralist-influenced conceptualizations of reading on the one hand and the insights and findings of neuroscience, classical pragmatism, and select narrative theorists on the other. Laying out a neurobiological model of narrative that explains how stories arise from and set in motion fundamental neuronal and cortical processes, Armstrong then asks how the aims and methods of narratology might be aligned with what we know about language and the brain. Since, as Armstrong argues, the formalist goal of identifying orderly, universal structures of mind, language, and narrative conflicts with the probabilistic, reciprocal interactions in the brain through which cognitive patterns emerge from our embodied experiences of the world, cognitive narratology needs to break with the structuralist legacy still evident in the terminology of frames, scripts,

ism's simplifying, dichotomous view of human mental life. But this initial revolution — so-called "cognitivism" or first-generation cognitive science — quickly succumbed to the equally reductive mechanistic model of the mind emanating from the then-emergent computer sciences.

4. Pragmatistic philosophers William James and John Dewey critiqued the damaging reductionism of the subject-object dualism pervading nineteenth-century psychology, and their objections were repeated in the 1960s with the emergence of ecological psychology in the work of James J. Gibson (1966), followed by Roger Barker (1978), Edward Reed (1996), and others, which also took aim at simplistic models of stimulus-response. For extended discussion of the pragmatists in the context of embodiment psychology, see Johnson 2007; for an excellent historical account of the influence of post-Enlightenment science and sociohistorical elements on the development of American pragmatism, see Menand 2001; for brief glosses of these, see Easterlin (2012: 154–57, 103–14). For a crucial early discussion of extended mind, see Donald's (1991) *Origins of the Modern Mind*; for a more recent account, see Clark 2008. For an important recent theorization of narrative experientiality from an enactivist perspective, see Caracciolo 2014, and for an enactivist, "Bayesian" model of reader processing, see Kukkonen 2014. For an accessible introduction championing enactive, cognitive approaches to literature and addressed primarily to academics in English studies, see Cave 2016.

and preference rules and to embrace the paradigm shift proposed by various pragmatically oriented, phenomenological theories of narrative.

Whereas Armstrong is a literary scholar calling attention to the epistemic lag between current knowledge of brain processes and interdisciplinary models of literary reading, particularly those in cognitive narratology, the next two essays, coauthored by psychologists and communications theorists, highlight the complexity of empirical evidence on the topics, respectively, of personal relevance and social cognition. Currently, cognitive literary scholars are keen to assert that literary reading has demonstrable social and individual effects, and that emotional response triggered by empathy is the key to transformation in thought patterns and behavior. While the empirical evidence marshaled here suggests that, on the whole, this is almost certainly the case, it also illuminates the sheer range of cognitive processes operant in imaginative reading and the attendant difficulty of assessing literature's impact. Those processes and that impact are highly influenced—and often, indeed, directed—by factors including the individual reader's self-concept and one or more of the various components of his or her background experience.

How does felt connection emerge from the interaction between individual experience and textual representation? Over the ages, many theories, from those insisting on an essential human nature to those asserting sociocultural identities to those claiming a panhuman cognitive substrate as the root of connection to literary arts, have either tacitly assumed or directly asserted a necessary or desired commonality between the contents of texts and the experiences of readers. But what is the cast and/or degree of this commonality? Within the past fifty years, socially oriented movements, including feminist, Marxist, African American, and postcolonial approaches, have sensitized scholars to differences in aesthetic experience emerging from sociocultural background, eschewing claims for a shared human nature. Conjoined with the long-perceived irrelevance of the humanities and the arts, this development has an ongoing influence on pedagogy, as faculty consciously ponder the relevance—or, to use our students' term, "relatability"—of the material they place at the center of their courses. But just as the phrase "relate to" most assuredly calls out for replacement with a more helpfully descriptive verb, *relevance* is not the simple concept we might be inclined to assume, nor is the function of its component aspects in reading and viewing processes by any means straightforward or predictable.

Personal relevance, although central to sustaining an audience's interest in any given narrative, has received little systematic attention thus far. In their comprehensive review article "Personal Relevance in Story Reading," Anežka Kuzmičová and Katalin Bálint document experimental and other empirical evidence on narrative processing in order to unravel which types

of personal relevance are most likely to affect readers and what kinds of impact—for instance, aesthetic, therapeutic, persuasive—they appear to generate. Whereas research results suggest that narratives, irrespective of genre, appear to be read through the lens of the reader's self-schema, this finding does not imply that large-scale similarities between reader and character, such as gender, necessarily produce relevance effects. Instead, a variety of factors contribute to such effects and their perceived value. For example, certain groups of readers, especially in particular situations, may experience personal relevance and related effects more strongly than others. Likewise, although thematic saliency is undoubtedly important, emotional valence is a significant factor in perceptions of relevance.

In sum, as literary scholars consider relevance in critical, theoretical, and pedagogical engagements, the varieties, manifestations, and force of such effects must be weighed against a tendency to assume the efficacy of identification, especially since some research shows that the power of such effects can become excessive or outright detrimental to reader experience. This finding coheres with ongoing controversies about so-called trigger warnings at elite American universities, which precisely concern the unintended disturbance to students of some course content in the social sciences and humanities. Kuzmičová and Bálint's research review, then, suggests that literary scholars should engage in nuanced consideration of the meanings of relevance and its goals: for instance, Does perceived or wishful similarity occur prior to or as the product of reading? When do such identifications produce personal resonance or empathy and insight?[5] What is the impact of personality traits or crises at the time of reading?[6] However we might apply the results to theoretical formulations, the wealth of studies elucidated here limns a clear picture of the multifarious processes and circumstances through which relevance might emerge as awareness and insight.

Just as Kuzmičová and Bálint's essay asks us to consider the range of evidence on readers' connection to literature, Richard Gerrig and Micah Mumper explore the contribution of literature to social cognition, taking up

5. In a recent essay from the perspective of narratology, one that distinguishes sympathy from empathy (as does Caracciolo [2014: 130]), Faye Halpern (2018) focuses on unreliable narrators to highlight the complex ethical effects of "feeling with" and "feeling for" in three different works of film and literature. Her close analysis of the dynamics of feelings, ethics, and focalization counsels caution about claims for the emotional route to ethical insight or awareness.

6. David Michelson (2014a) has argued that the personality trait of "openness to experience" is a key factor in the enjoyment of literature. However, his classroom case study approach to personality and literary reading (Michelson 2014b) does not entirely converge with predictions related to personality assessments; in particular, for some students, negative experiences in high-school English classes rather than personality strongly colored attitudes toward literary reading.

the specific claim that mental simulation of narrative events constitutes the process of reader empathic engagement. Although research results indicate that engagement with works of fiction may benefit readers' social cognitive abilities of empathy and theory of mind, there is little direct evidence to support claims about the causal mechanisms underlying the positive impact of leisure reading. Summarizing simulation theory, which has emerged as the most common explanation, Gerrig and Mumper highlight the need for a more concrete theoretical instantiation, pointing to three other psychological accounts of the origins of the emotional content of readers' narrative experiences. Thus illuminating the diversity of processes that contribute to readers' affective responses, Gerrig and Mumper infer that ordinary processes of learning and memory, unaided by narrative simulation, might explain changes in readers' social cognition.

Adopting a definition of "simulation" as an offline functioning of the belief-desire system that enables readers to comprehend what characters are thinking and feeling—a definition generally accepted by a number of psychologists and cognitive literary scholars—Gerrig and Mumper point to the lack of specificity in the concept, which does not indicate whether simulations are strategic or spontaneous, as well as to more straightforward accounts of empathy.[7] Additionally, in all three of the accounts of emotional elicitation they discuss, reader feeling need not align with that of character. Like Kuzmičová and Bálint, then, Gerrig and Mumper underscore the complexity of response to literary reading; together, these two essays point to the variety of mechanisms and the multiple conditions that might affect emotional valence and potential changes in social awareness.

7. For a summary of the theoretical dimensions of simulation theory (ST) in philosophy of mind, see Barlassina and Gordon's (2017) encyclopedia entry, wherein the authors confess that ST is a family of theories rather than a single theory. At issue are the degrees of theory of mind and consciousness it entails and the exactitude of in-time affective repetition in simulative processes, ambiguities that render it akin to the outdated term "imagination." Kukkonen (2014) wisely avoids the concept *simulation*, in contrast to other literary scholars and reading psychologists, who use it flexibly; at times, theorists seem to assert the identity of actual and hypothetical experience. See, for instance, Hogan, following Oatley, in Aldama and Hogan (2014: 80–81, 13). Caracciolo (2014: 131–32) employs "simulation" to refer to consciousness-enactment in empathic engagement with others' mental states, a usage generally in line with what Wojciehowski and Gallese (2011) call "liberated embodied simulation." Weik von Mossner especially emphasizes the connection between bodily based affective response and narrative processing. However, Kuzmičová (2014: 279) notes the underdiscussed problem of consciousness in reading and cognitive literary theory, wherein "non-conscious sub-personal processes . . . and conscious experience (i.e., processes at least partly noticeable to the subject herself) . . . are treated as if they were the same thing," and further, she doubts the extensive repetition through time of another body's experience on the sound basis that it would overtax the reading mind. Kuzmičová herself only uses "simulation" to refer to the activation of the sensorimotor cortex to action-indicating language—thus, for subpersonal processes.

Given these complexities in relevance and emotional response, literary theorists should be cautious in hypothesizing the causal path leading to enhanced social cognition. Overall, the evidence and skeptical considerations of these social scientists harmonize with Armstrong's elucidation of neuroscience; as a group, the three essays together suggest that processes of narrative construction and ethical meaning-making are not only far from linear but also extremely context dependent.

2. Empathy and Literary Ethics

Do the arts make us better? In a book chapter with this title, John Carey (2006) voices skepticism about testing art's capacity to promote personal and social improvement. Citing Elliot W. Eisner's 2002 *The Arts and the Creation of Mind*, Carey largely concurs with Eisner that, while pedagogy in the arts certainly equips students to think with greater aesthetic sophistication, promising social and individual benefits beyond this seems unjustified based on the difficulty of gathering evidence. If

> the aim of education . . . is to help students lead personally satisfying and socially constructive lives outside school . . . setting up an experiment to find how far this is achieved by arts education would, [according to Eisner], be next-to impossible. You would have to have two groups of students, one following an arts curriculum, the other not, and you would have to decide what kind of moral character you would like them to have, what could count as evidence of their having it, and how the extent to which they had it could be measured and evaluated. (Carey 2006: 102).

Here, in fact, Carey, following Eisner, gives a mere glimpse of the obstacles to controlled studies in this area, which also include individual differences in personality, development, and social class, not to mention other salient factors like family size and dynamics, interests, and preferences. Other complicating questions arise: Are the arts discussed inside and outside the home? If so, what is the nature of these discussions? How do existing relationships with other participants in these discussions color (or even determine) response? And so on.

But cognitive scholars who are, unsurprisingly, anxious to claim the epistemic and ethical value of literary pedagogy should not be demoralized by this vision of the impossibility of large-scale longitudinal studies and resultant thoroughgoing proofs for the efficacy of arts (including literary) education. The lesson here, it seems to me, is that while empirical studies produce critically significant evidence about parts of reading and viewing processes and their relation to self-development and social cognition, literary scholars

need to embrace rather than reduce the dynamism, range, and idiosyncrasies of aesthetic engagements, self-consciously turning these features into solutions rather than trying to sweep them under the rug. As Gerrig and Mumper sensibly observe, if literature has an impact on social cognition, then this is clearly a double-edged sword: in plain terms, if the fuzziness of the line between everyday and fictional thinking can improve our sensitivity toward and treatment of others, then it can also do the opposite. Gerrig's extensive research in reader psychology, in fact, consistently demonstrates that fictional and factual information are not processed or stored in separate mental compartments.[8] "Simulation," as Joshua Landy (2012: 39) puts it, "by helping us plan, may assist us in implementing any altruistic schemes we happen to have, but simulation may also assist us in implementing a successful bank heist, a successful kidnapping, or a successful cull of spotted owls." Understanding that literature has effects on human thought and behavior, in short, compels us to ask how we can shape our scholarly and pedagogical projects in ways that promote the kinds of effects we seek, those that enhance our ethical disciplinary commitments.

Accordingly, whereas the essays in section 1 of this special issue address neuroscience and empirical findings that raise questions about the role, underlying processes, and function of imaginative literature, the contributions in section 2 focus directly on the empathic potential and ethical implications of literary experience and pedagogy. Of course, the Romantic-era author Joanna Baillie could not have known the results of empirical studies in reader psychology just emerging today, but her approach to writing two hundred years ago is a valuable reminder that there is a considerable history—dating, in fact, back to the classical origins of criticism—behind both the belief in literature's impact on behavior and the creation of psychologically informed art to produce desired effects. Collaborating across the disciplines of psychology and literary studies, M. Soledad Caballero and Aimee Knupsky, in "'Some Powerful Rankling Passion': An Interdisciplinary Exploration of Emotion Regulation Strategies in Joanna Baillie's Passion Plays," bring Baillie's work into alignment with contemporary psychological and neuroscientific discussions of emotion regulation. The authors elucidate

8. Gerrig (1993) critiques what he memorably calls "toggle" theories in *Experiencing Narrative Worlds*; taking up the tradition exemplified by Samuel Taylor Coleridge and others, he points out that empirical research does not support the view that readers and audiences switch back and forth between the fictional and the factual. Cognitive literary scholar Patrick Hogan, who defines fiction as "the simulation of emotionally consequential goal pursuit" and who has written at length about affect and narrative, also stresses the similarity between fictional characters, imaginative experience, and neurophysiological processes in actual situations and imaginative experience (Aldama and Hogan 2014: 13). For a brief discussion, see Aldama and Hogan 2014: 13–18.

Baillie's concept of "sympathetick curiosity," point to its correspondence with George A. Bonanno and Charles L. Burton's 2013 model of regulatory flexibility, and suggest that these theories, in conjunction with Baillie's "plays on the passions," demonstrate how art can improve self-regulation and self-knowledge. Focusing on two of Baillie's most popular "plays on the passions," Caballero and Knupsky argue that regulatory flexibility is a learned skill that can be enhanced by actively engaging sympathetic curiosity, thus concurring with Baillie, who insisted that her plays taught audiences how to avoid the destructive nature of the passions. They suggest that by watching protagonists' manifestations of and responses to an emotion, audiences learn to develop the regulatory flexibility essential to its expression and management. Since Baillie's plays dramatize not just differences in individual responses to emotion and in emotion regulation but also the role of the other in initiating, maintaining, or dampening emotion, they guide viewers to improve interpersonal regulatory skills.

Thus illuminating Baillie's self-conscious ethical intent and her didactic approach to playwriting, which was informed by eighteenth- and nineteenth-century Scottish psychology, Caballero and Knupsky endorse the immersive and pedagogical validity of this perspective based on present-day cognitive studies, explore potentially negative emotional motivations, and indicate empathic processes that facilitate conscious decision-making. Also addressing the problem of negative emotion and behavior but taking up post–Romantic era British and American examples, the next two essays span considerations of the wide-ranging impact and pedagogical value of texts including Richard Wright's *Native Son*, Harriet Beecher Stowe's *Uncle Tom's Cabin*, John Steinbeck's *Grapes of Wrath*, and Mary Shelley's *Frankenstein*.

In their essay on Wright's novel, beginning with a historical account of its impact on the Supreme Court's 1954 *Brown v. Board of Education* decision, Marshall Alcorn and Michael O'Neill develop the concept of *adaptive affective cognition*, highlighting emotion's decisive role in reason. In "Adaptive Affective Cognition in Literature and Its Impact," the authors employ research in neuroscience to argue that *Native Son*'s affective impact reorganized the cognitive practices that authorized segregation. Paradoxically, Wright's novel, triggering racist fears with the image of an angry, violent black man, also ultimately reduces those fears, according to Alcorn and O'Neill. Drawing on research on emotional bias in thought, the authors claim that emotional links in cognition, though they interfere with logical ratiocination, are nonetheless the only solution to the problem of bias, simply because emotion is deeply implicated in attention, memory, and reasoning. Openness to new information requires emotional priming; integration of new data within a reasoning system is facilitated by an aesthetic synthesis of bodily, affective, and

cognitive data; and assignment of value, also dependent on emotion, constitutes a core feature of temporally durable emotionally informed reason. Alongside contemporaneous sociological research and the legal instrument of the Brandeis brief, Wright's *Native Son* contributed to legal and social change, exercising literature's distinctive capacity for affective involvement.

Just as Alcorn and O'Neill argue for the irreplaceable legal and social impact of emotionally powerful literary experiences on reasoned decisions, Mark Bracher insists that literary study strikingly and perhaps inevitably influences moral character and thereby contributes to social justice. In "Can—and Should—Literary Study Develop Moral Character and Advance Social Justice? Answers from Cognitive Science," Bracher reports on recent findings in the cognitive neurosciences indicating that morality, character, identity, and values are largely if not totally functions of social information processing. Commonsense views held by many literary scholars that see these as monolithic elements of personhood and thus unavailable to outside interventions are therefore most likely incorrect. Arguing against Stanley Fish's assumption that it is neither possible nor permissible for educators to build character or advance social justice, Bracher presents compelling evidence that literature can alter the neurocognitive structures that produce and direct social information processing. According to Bracher, combining specific literary texts and pedagogical practices in the classroom alters the neurocognitive structures underlying social information processing, and the subsequently revised cognitive routines contribute not only to moral character and social justice but also to personal well-being. The nature and direction of this alteration, moreover, are profoundly ethical: far from indoctrinating, they promote capabilities and habits of cognition that enable students to perceive and understand both others and themselves more clearly and comprehensively.

The first three essays in section 2, then, illuminate how emotion, intellection, information processing, and pedagogy serve as interrelated elements of the ethical value of literature. But it is hardly beside the point that the primary works at the core of these arguments are self-consciously and indeed didactically constructed around notions of self- and social improvement. The difficulty and necessity of emotional self-control and the comprehensive destructiveness of racism are, respectively, at the heart of the decline and demise of Baillie's and Wright's characters, so literary scholars should be wary about universalizing claims for the direct moral effects of literature on emotion regulation, prejudice, and social change. Indeed, assertions of this kind would be false on their face, given the enormous diversity of the literary arts—so much literature simply does not work in this way. In her Tom Ripley novels, for instance, Patricia Highsmith, employing a spare, realistic style,

focalizes the narrative through her sociopathic main character, thus both heightening suspense and eschewing moral commentary as Ripley repeatedly benefits from his crimes. In horror films such as John Carpenter's *The Thing* (1982) and Ari Aster's *Hereditary* (2018), all-powerful evil apparently wins out. Since literary art is so often about problems, it is not difficult to explain the epistemic and ethical value of immersion in a sociopathic personality or in the overwhelming make-believe threats of well-made horror films. However, because cognitive literary studies draw on theories about actual persons, they must guard against literalizing and moralizing biases that unintentionally elevate select realist modes and avoid transgressive or fantastical material. If such works forge swords that might cut in two directions, then scholars need to address the psychological and social functions they might serve and incorporate these considerations into research and course design.

In keeping with this perspective, the final essay in this section, "On Punishment and Why We Enjoy It in Fiction," addresses a perplexing problem for those highlighting the salutary impact of literature on social cognition: the fictional satisfaction of moral intuitions whose behavioral outcomes are no longer permissible in modern state society. Margrethe Bruun Vaage theorizes that spectators, even in Scandinavia where harsh punishment is roundly condemned, may enjoy excessive punishment when viewing fiction. Pointing out that humans have evolved as prosocial punishers whose emotions and intuitions facilitate collaboration and who desire punishment for wrongdoers even if no harm has been done to them personally, Vaage explains and adopts the dual-process model of morality, which posits both rational and intuitive routes to moral evaluation; however, she underscores the significance of intuition and emotions in this process. Vaage proposes a theory of *fictional reliefs*, noting that audiences embrace punishment more easily when the character who punishes is clearly fictional, and she hypothesizes that a mixture of filmic modes facilitates one of two paths to moral judgment. In films such as *The Girl with the Dragon Tattoo* (2009) and *Let the Right One In* (2008), the examples she employs here, excessive punishment is typically carried out by a vigilante avenger who is often a fantastic character with superhuman and/or supernatural attributes, thus relieving the spectator of the obligation to evaluate rationally. When fantastic elements permeate an otherwise realistic setting via such fictional reliefs, they permit the spectator to fully enjoy the main characters' vigilante revenge.

Vaage's essay is a reminder that the emergence of nation-states over the course of cultural evolution rests on the choice of large and diverse groups of persons to cooperate for the common good, a reconfiguration of human social organization that requires a revised morality and laws to enforce it. Vigilante and blood revenge served our human ancestors who lived in close-

knit kinship groups, but today they create chaos. Following evolutionary psychologists who theorize that many of our adaptations are aligned with patterns of the distant past rather than our current lifeways, Vaage asks us to consider anachronistic moral response in our appreciation of art. Essays like Vaage's compel cognitive literary scholars to reflect on the role of forbidden thoughts and behaviors in literature. No less importantly, they ask us to raise these matters explicitly in the classroom. If emotion regulation, emotional response, and information processing can be altered through viewing, reading, and teaching, and if scholars choose to pursue these laudable ends, they need equally to confront and address pleasurable participation in the transgressive and sometimes frankly criminal elements of literary art. The idea of art as a pressure valve is not new, but understanding the why, when, and how of fictional relief as well as what works offer this outlet is just as ethical a goal of criticism as social justice.

3. Healing Planet, Species, and Self

A complete consideration of cognition, literature, and ethics takes into account processes of mentation and emotion in all dimensions of human experience: internal mental processes, interpersonal engagements, and transactions with the broader environment. Although this journal issue is generally organized from local to global topics, moving progressively outward toward larger scales, the aim is for the reader to think recursively—across and between the essays and issues offered here. In keeping with this purpose, the final section demonstrates the broader reach of cognitive approaches through literary engagements with the nonhuman natural world, then brings matters back to individual response and transformation in the conclusion, a reminder that the healthy individual is the point of origin for other kinds of ethical growth. Thus, engaging with the nature of ethics and healing across scales, this section explores both extra- and intrahuman dimensions.

Having asked how social cognition and justice might be improved through reading and pedagogy, the first essays in this section ponder how that ethos of concern might be extended to the nonhuman natural world. In "Why We Care about (Non)fictional Places: Empathy, Character, and Narrative Environment," Alexa Weik von Mossner extends the work of cognitive scholars to suggest how literary reading can lead us to care about natural environments, whether these environments are threatening for humans or threatened by human actions. Drawing on scholarship in philosophy, empirical psychology, cognitive science, and literary studies asserting that literary reading and pedagogy can develop emotional capabilities essential for responsible citizenship and social justice, Weik von Mossner conjoins these perspectives

with the emerging subfield of cognitive ecocriticism. Cognitive ecocriticism maintains that species-typical cognition is a vital framework for studies in literature and the environment, explaining, among other things, emotional dispositions—loving, indifferent, and antipathetic—toward material environments. Weik von Mossner takes up Ann Pancake's novel *Strange as This Weather Has Been* (2007), exploring the ways in which it cues empathy for an actual environment, Appalachia, that is wounded and scarred. Pancake's choice not only of multiple focalization but also, in particular, of a preponderance of teenage narrators allows for highly emotional viewpoints. According to Weik von Mossner, through this use of *authorial strategic empathizing* (Keen 2010), Pancake facilitates readers' *liberated embodied simulation* (Wojciehowski and Gallese 2011) of characters' affective experience of their environment. Compelling readers to experience imaginatively what it is like to love an environment and then witness its destruction by mountaintop removal mining, Pancake engages readers in the social and moral issues around resource extraction.

Like Weik von Mossner, Erin James addresses bonds extending beyond persons and social groups. In "Nonhuman Fictional Characters and the Empathy-Altruism Hypothesis," she acknowledges the difficulty of presenting animal consciousness and employs cognitive approaches to literature to illuminate cross-species empathy. Highlighting a trend within current models of narrative empathy that suggests that readers' ability to feel for nonhuman characters is dependent wholly on anthropomorphism, James investigates how narrative point of view facilitates or inhibits knowledge and understanding between readers and chimp characters in two specific novels, Colin McAdam's *A Beautiful Truth* (2013) and Karen Joy Fowler's *We Are All Completely Beside Ourselves* (2013). First explaining the cognitive differences between humans and chimps to stress just how difficult it is to represent chimp cognition and emotion in narrative and to elaborate on the resulting challenges that this difficulty poses for models of narrative empathy, James then explores the mechanisms by which written narratives that refuse anthropomorphism, such as McAdam's and Fowler's novels, might inspire a real-world ethics of care for nonhuman subjects. Ultimately, James champions an expansion of current models of narrative empathy, surmising that human bridge characters serve as a vital affective link between human and nonhuman animals, thereby fostering real-world care for nonhuman subjects.

The development of literature and environment in the 1990s was bedeviled by the widespread assumption among Americanist ecocritics that representations of consciousness evinced a reprehensible bias toward the human

and, presumably, against the nonhuman natural world.[9] Recognizing that our modes of knowing and the art objects we create are by their very nature inescapably human, Weik von Mossner and James can ask about the links between human understanding and feeling and a nurturing, productive relationship with nonhuman nature. Since persons, species, and nonhuman environments are inextricable from any human life, and because the far-reaching empathic and ethical engagements that scholars aspire to through literature can only be achieved from the vantage point of personal well-being, a meditation on the healthy self sounds this collection's final note. In "The Poetry and Practice of Meditation," Elizabeth Bradburn specifically asks, Is reading poetry therapeutic? And further, could the great religious lyricists of the seventeenth century have understood it that way? Citing neurophysiological evidence that reading poetry involves some of the same brain structures as those upon which human psychological well-being depends, Bradburn argues that George Herbert's devotional lyrics, long understood as Christian meditations, are structurally consistent with the modern practice of mindfulness meditation. Neurally, meditation entails the reduction of activity in the brain's default mode network; phenomenally, it requires repeatedly bringing the wandering attention back to a chosen meditation object. Seventeenth-century devotional poetry likewise centers on a recurring image, indicating significant overlap between that century's Christian meditative tradition and modern secular and therapeutic theory and practice.

Attending to several examples, Bradburn demonstrates that Herbert's poetry is isomorphic to meditative practice because the image of meditation has a distinctive pattern of movement—spontaneous wandering and controlled return—that can be created in several sensory modalities. This image, complex enough to define Herbert's poetry as meditative, also potentially typifies a meditative literary mode with a distinctive relationship to the imagination. Bradburn maintains, therefore, that meditative poems create, by design, aesthetic experiences that provide some of the same emotional benefits as meditation, such as greater compassion, increased ability to regulate emotions, moderation of anxiety, and better focus and attention. As with meditation, however, the skill of reading poetry takes time, practice, and humanist teaching to master; therefore, she concludes that the therapeutic potential of meditative poetry speaks to the value not just of poetry but of humanist education in general.

Bradburn's insights harmonize with the recent essay "Literature and Happiness," wherein D. J. Moores (2018: 260) declaims at the outset, "It's not

9. For a critique of this realist bias and of the reification of the nature-culture dichotomy in ecocriticism, see Easterlin 2012: 93–105.

literary unless it's depressing." Pointing out along the way that a bias toward narrative settles conflict-based genres at the heart of literary studies, Moores sensibly observes that literature is not just about problems. Indeed, citing the work of social psychologist Jonathan Haidt, he reports that the psychological processes of elevation may be more complex than those of negative emotions. At a time when anxiety and depression are at record levels among young people, literary scholars would do well to heed the insights of Moores and Bradburn: this hard work of feeling good and of exploring varied moods and psychological states through literature may be worthwhile after all. Literature has a special capacity to raise awareness and the means to do it by its elicitation of experiential engagement, but the changes to self and in social cognition are not always easily arrived at or readily accepted.[10] In this light, combining the hard lessons of Baillie, Wright, Larson, Pancake, and others with a positive, intellectually and literarily grounded sense of the route to flourishing may well give humanity the personal security and peace of mind to be better caretakers of ourselves and our environment.

Because aesthetic behaviors are both evolutionarily expensive—that is, requiring a lot of time and energy—and complex, they are a puzzle not to be neglected by students of natural selection. Faced with these and other costly behaviors and adaptations, evolutionists seek to explain their utility, since an effortful activity unconnected with survival or reproduction is not, in today's jargon, favorable to a species' long-term enactive embedment in the environment. But knowing the cause of art's emergence is a complex quest, not very amenable to the tools of science.[11] On the other hand, studying how

10. Carey (2006: 172, 177) maintains that "disagreement is . . . a necessary condition for the existence of ethics as an area of discourse" and, following this logic, claims the superiority of literature over the other arts, because it "is not just the only art that can criticize itself, it is the only art . . . that can criticize anything, because it is the only art capable of reasoning." While these claims are too unqualified for blanket acceptance—ethics as Appiah has defined it does not always entail disagreement or conflict, and movements in music and painting, for instance, most certainly criticize the art of earlier eras without the intervention of language and reason—Carey still has a point about literature's special capacity for criticism (broadly defined). Written literature has a unique relationship to higher levels of consciousness, given two things, the nature of language processing and the capacity for symbolic text to supersede the biological limitations of short-term memory, enabling extended or hybrid mind. See Donald 1991.

11. How to define the concept *art* is a matter that must be settled at the outset of any such theorization. Carey (2006: 3–31) glosses the major theories, and concludes that anything ever considered an artwork by a single person constitutes art. Carey's approach privileges the plastic arts, as does most theory treating the arts as a category, and the theories he surveys are for the most part traditional in that they seek to define the essence of art. By contrast, Ellen Dissanayake (1992) considers the arts from an evolutionary anthropological perspective, therefore foregrounding function over essence. Dissanayake (42) proposes that art is "making special," which functioned for our human ancestors as a means of exerting control in the face of environmental uncertainties. Since, in this perspective, many ancient art activities are communal (ritual, dance, music, body adornment, and so forth), art activities also served to consolidate

the arts function in the here and now, and exploring how literary scholars might extend the value and impact of a specific art form such as literature, is fully within our reach. The multifarious affective, personal, and social engagements with literary art documented and considered in this issue illuminate the power of the humanities as a vital, shaping context, compelling scholars to self-consciously foreground ethical ends in the design of curricula and in research programs. Joining the insights of the contemporary sciences and humanities, literary studies can actively enhance the lives of socially committed and personally satisfied individuals, thus serving as a part of no less than a contribution to the life well lived.

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human bonds, thus enhancing the sociality of the group as well as the psychological perception of control.

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