

Literature and the Cognitive Revolution: An Introduction

Alan Richardson

English, Boston College

Francis F. Steen

Communication Studies, UCLA

Literary studies and the cognitive sciences, pursuing common interests in language, mental acts, and linguistic artifacts, have developed markedly different approaches to similar phenomena of reading, imaginative involvement, and textual patterning. Until quite recently, the distance between them has drawn more attention than their possible convergence (Franchi and Güzeldere 1994). A number of literary theorists and critics, however, have steadily been producing work that finds its inspiration, its methodology, and its guiding paradigms through a dialogue with one or more fields within cognitive science: artificial intelligence, cognitive psychology, post-Chomskian linguistics, philosophy of mind, neuroscience, and evolutionary biology. Reuven Tsur (1992) has been developing his “cognitive poetics” since the 1980s; the prominent psychoanalytic critic Norman Holland (1988: 6) demonstrated the advantages of attending to the “more powerful psychology” emerging from cognitive neuroscience in 1988; Mark Turner (1991: viii) advanced his far-reaching project of a “cognitive rhetoric” in 1991; and Ellen Spolsky (1993: 4) trenchantly brought a theory of “cognitive instability” to bear on literary interpretation in 1993. These and like-minded critics respond to the limitations (or, in Spolsky’s case, missed opportunities) of poststructuralist conceptions of meaning and interpretation by questioning the reigning models in the field, whether in the interest of

displacing, reworking, supplementing, or fundamentally regrounding them (Hart 1998). A spreading dissatisfaction with the more bleakly relativistic and antihumanist strands of poststructuralism has given a new urgency to the groundbreaking efforts of these and other literary critics to forge a “new interdisciplinarity” (Crane and Richardson 1999). Scattered attempts to forge links between literary studies and cognitive science, often in isolation from one another, are now being supplemented by more concerted and systematic efforts within an emergent field, broadly defined as cognitive literary criticism.

Cognitive scientists, for their part, have been borrowing freely from literary studies for some time, often adopting their key terms from rhetoric and literary criticism. Metaphor has been extremely important as a topic for research and a central concept for understanding the workings of the mind throughout the “cognitive” disciplines, as Yeshayahu Shen (1992: 567) argued in presenting a pioneering special issue of *Poetics Today* devoted to metaphor and cognition. Cognitive linguistics in particular has made an increasingly sophisticated model of metaphor production and comprehension central to the mind’s meaning-making capacities (Lakoff and Johnson 1999). Computer scientists and philosophers of mind have made extensive use of literary concepts in framing their ideas, whether general terms like “scripts” and “stories” (Schank 1995; Schank and Abelson 1977) or more specific ones like Daniel Dennett’s (1991: 111–13, 275–80) “stream of consciousness,” “multiple drafts,” and “Joycean machine.” Cognitive psychologists have built research projects around the investigation of such literary topics as reader response to narrative fiction (Gerrig 1993), the role of deixis in narrative (Duchan et al. 1995), and the oral transmission of poetic forms (Rubin 1995). Working from assumptions closely related to those of cognitive linguistics, Raymond Gibbs (1994) has sought experimental validation for a “poetics of mind,” arguing that traditional rhetorical figures like metaphor, metonymy, and irony reflect the workings of fundamental cognitive processes. The mind’s capacity for figurative thought, creative leaps, and fictional representation is becoming an increasingly important focus both for cognitive scientists and for scholars of literature.

This special issue marks a new phase in the emergence of cognitive literary theory and criticism. Whereas most work at the juncture of literary studies and cognitive science has addressed issues like narrative, figurative language, reader response, prosody, or imagery in synchronic fashion, these essays collectively demonstrate, in theory and in practice, the advantages of rethinking the history of literature and culture from a cognitive standpoint. Their approach aims more to supplement than to supplant the current approaches and methodologies relied upon in historicist and other

contextualist studies of the literary past. Contemporary theories of literature and culture, in our view, have made remarkable progress in demystifying traditional humanist and religious concepts of supposedly timeless categories, such as self, identity, and morality, to posit instead historically contingent and culturally constructed entities. Such theories have also successfully demonstrated that the category of the natural has frequently been invoked to play a rhetorical role in providing a conceptual backing for particular forms of domination and oppression, giving an apparent legitimacy to discriminatory practices on the basis of race, gender, and class. To document and question the rhetoric of oppression is a centrally significant task of literary and cultural studies. What the discipline has been significantly less successful in addressing, on the other hand, is why and how this rhetoric works. The relative failure on these counts is linked to the intense reluctance of literary and cultural studies to engage with the natural as a category that has its own history, forming the conditions of possibility for the cultural. To construct culture, human beings intimately rely on immensely complex bodies, nervous systems, and sensory systems; these structures have a history that is neither identical to nor separate from the culture they make possible. Struggling with a dated if widespread conception of the natural, literary and cultural studies have so far been unwilling to take on the task of rethinking the natural in terms of its more recent articulations within disciplines ranging from psycholinguistics to cognitive neuroscience, evolutionary biology, and cognitive anthropology rather than simply denying its existence.

With this issue we wish to address the challenge of reconceptualizing the cultural significance of the natural in contemporary terms. Nature can no longer be seen as essentialist, normative, and timeless. Anthropology, linguistics, and neuroscience point clearly toward a novel conception of nature that is contingent and historical with a complex and multifaceted relation to the category of the cultural. The essays in the first section, “Overview: Toward an Integrated Cognitive Poetics,” seek in their different ways to advance a conception of a historical process that is structured but innovative, eschewing unqualified relativism no less than an essentialist and timeless vision of the natural. Although working from divergent theoretical positions, each of these essays sets out to “historicize” literary subjectivity in a revisionist manner, radically extending the notion of history to include our evolutionary past: the millennia during which basic conceptual capacities, distinctively human emotions, and the impulse behind literary activity itself developed among human beings. The writers approach their subject at the level of the species, a level of analysis almost entirely neglected within recent literary theory, though it has again become crucial for neighboring

disciplines like linguistics (Pinker 1994), anthropology (Deacon 1997), psychology (Donald 1991), and philosophy of mind (Dennett 1996).

Thus Mark Turner proposes that conceptual blending, a mental operation seen in metaphor and allegory, is neither costly nor reserved for special purposes: Although largely ignored by two thousand years of rhetorical studies, it is ubiquitous, fast, and clearly present in our evolutionary history. If the literary mind *is* the everyday mind (Turner 1996), then the foundations of literary history extend well back into the human evolutionary past, and the term *literary* applies not only to oral forms and traditions but to the basic cognitive processes that characterize much of quotidian cognitive life. Paul Hernadi also extends the notion of literary history to include “pre-historic times” in speculating on the role that literary or protoliterary behaviors might have played in facilitating human survival within a complex and challenging early social environment. Rather than locating deep continuities between literary and basic cognitive operations in the fashion of Turner, Hernadi instead proposes a series of more specialized instrumental functions for imaginative “worldmaking.” These functions served to expand the horizons of human awareness as well as to integrate beliefs, feelings, and desires, favoring novel mental capacities through a process of natural selection acting in concert with cultural innovation. For Ellen Spolsky cognitive flexibility is crucial to understanding the evolutionary significance of the universal mental structures that make cultural change and literary historical innovation inevitable. In contrast to Turner, Spolsky views cognitive literary theory as providing at once a warrant and a corrective for post-structuralist theories of meaning: It proposes a provocative “neurologically authentic” and evolutionary grounding to deconstructionist claims regarding the instability of meaning. Without attempting to ignore, elide, or minimize the decisive effects and opportunities provided by cultural and historical contingency, these essays in their quite different ways situate the literary mind within what the poet Gary Snyder (1999: 12) has called humankind’s “deep history.”

Reuven Tsur is also concerned with the “adaptation devices” that shape the generation of cultural and literary forms and traditions. While accepting the role of contextual and contingent factors in the development of a given poetic form, Tsur argues that literary historical change is nevertheless constrained by universal rules of cognitive processing and that given instances of cultural transmission can themselves be shown to remain consistent with what psycholinguists and cognitive psychologists have learned about human mental capacities and operations. In arguing that cognitive universals and cultural particulars, inherited constraints and local impingements must be considered together to develop a robust account of liter-

ary historical change, Tsur's contribution forms a bridge between the three essays in literary theory that precede his own and the three studies of particular literary works that follow it.

Few critics have as yet produced cognitively informed interpretive readings of literary texts that at the same time fully acknowledge their historical specificity. Still fewer have done so in critical dialogue with the reigning historicist and related poststructuralist approaches in the field. (For a notable exception see Crane 2001.) This deficiency is unfortunate, since above all a new theoretical perspective can demonstrate its usefulness through an intimate engagement with cultural texts. As Spolsky (1993: 3) has pointed out, it is by examples of "good reading" that literary scholars tend to convince one another of their interpretive claims. The essays gathered in the second section, "Cognitive Historicism: Situating the Literary Mind," represent a new departure for cognitive literary criticism. They demonstrate that issues in literary history, far from being occluded by approaches that recognize the validity of human universals and species-specific cognitive mechanisms, can be productively reopened in ways that have eluded criticism that relies on purely constructivist notions of the subject. Engaging with more localized issues within traditional literary historical fields, from the Restoration to the nineteenth-century novel, they address the complex interrelation of evolved neurocognitive structures and contingent cultural environments with an eye to specific examples of cultural change. Each essay addresses a specific text with an awareness both of its situatedness in a given sociocultural moment and of how invariant features of embodied experience and human meaning-making activity may facilitate acculturation or provide a basis for resisting a dominant ideology or discourse. Moreover, each takes up the ongoing critical conversation on the text in question precisely at the point where cultural constructivist models have reached an impasse.

Francis Steen examines Aphra Behn's (1687: i) claim that literary works and performances convey "secret Instructions to the People" that shape moral and political attitudes and intentions in a uniquely effective manner. Steen seeks not only to specify the ideological work performed by Behn's *Love-Letters between a Nobleman and His Sister* (1684) in its political and cultural context, but to provide a model for the cognitive processes that enable and facilitate literary learning and the workings of propaganda. Lisa Zunshine similarly aims to supplement new historicist analyses of the ideological aspects of eighteenth-century writing for children, specifically in relation to Anna Barbauld's *Hymns in Prose for Children* (1781), by indicating the cognitive mechanisms called into play by Barbauld's version of "catechistic" form. Like Steen, Zunshine recruits blending theory to this end, compli-

cating it, however, with a modular account of conceptual categorization (borrowed from evolutionary psychology) that brings into relief the strategy of cognitive disruption and recategorization enacted by Barbauld's didactic prose poems. Alan Richardson relies less on cognitive linguistic theory than does either Steen or Zunshine, rethinking Jane Austen's late style (and her unprecedented emphasis on head injury) in *Persuasion* (1817) from the double perspective of contemporary cognitive neuroscience and the emergent brain-based psychologies of the Romantic era. Although Richardson takes his initial bearings from recent work on the biology of mind and temperament, his analysis of Austen places *Persuasion* squarely in the neuroscientific context of its own time—a context, he claims, that critics writing in advance of the “cognitive revolution” were unprepared to appreciate. Together, these essays suggest that recourse to cognitive, evolutionary, and neuroscientific models can usefully extend the parameters and productively complicate the methodologies of literary and cultural history.

Cognitive literary criticism embraces a wide variety of interpretive strategies. By delineating the models of mental operations that influenced writers working in earlier historical periods, critics can negotiate between these historical models (whether intuitive or explicitly theorized) and the more recent paradigms of cognitive neuroscience. Specific hypotheses about mental operations, ranging from conceptual integration to domain specificity, can be invoked in conjunction with textual and historical methodologies to yield novel perspectives. By situating artistic and intellectual innovation in the broader context of the history of humanity as well as within the history of a particular individual and culture, these essays demonstrate that a cognitively informed close reading of cultural artifacts can not only aid in the interpretation of specific literary texts but can also help advance a more detailed understanding of the forces that both enable and constrain cultural change. Taken together, they aim to intrigue rather than to define, to provide a sense of new theoretical directions and interpretive possibilities rather than to delimit in advance a promising new field for interdisciplinary scholarship. The cognitive revolution, after all, has only just begun.

Special Acknowledgments

This special issue was inspired by the three-session forum “Historicizing Cognition: Literature and the Cognitive Revolution” held on December 29 and 30 at the 1998 Modern Language Association (MLA) annual convention. The forum, organized by Francis Steen and Lisa Zunshine, represented a new stage for the cognitive study of literature in several ways. Most

importantly it brought together a number of scholars who had been working along related lines but with little sense of a collective aim. It also helped galvanize interest in the new work being done at the juncture of literary studies and cognitive science among a large cross-section of literary scholars. Not least the forum represented an unprecedented level of institutional recognition on the part of the MLA, which also approved the creation of the new Discussion Group on Cognitive Approaches to Literature, inaugurated at the same convention. We wish to thank the MLA, its officers and executive council, and its executive director Phyllis Franklin for their encouragement and support. We are also grateful to Meir Sternberg both for his own extensive comments and precise suggestions on various essays and for enlisting and collating the critical responses of a number of informed and conscientious (and anonymous) readers. Their combined efforts were crucial in helping shape, refine, and clarify the essays that follow. Finally, we thank the various contributors to this issue for their intellectual candor and exemplary professionalism in responding to queries and suggestions, sometimes at short notice, teaching their editors a good deal in the process.

References

- Behn, Aphra
1687 *The Lucky Chance; or, An Alderman's Bargain* (London: W. Canning).
- Crane, Mary Thomas
2001 *Shakespeare's Brain: Reading with Cognitive Theory* (Princeton, NJ: Princeton University Press).
- Crane, Mary Thomas, and Alan Richardson
1999 "Literary Studies and Cognitive Science: Toward a New Interdisciplinarity," *Mosaic* 32(2): 123–40.
- Deacon, Terrence W.
1997 *The Symbolic Species: The Co-Evolution of Language and the Brain* (New York: Norton).
- Dennett, Daniel C.
1991 *Consciousness Explained* (Boston: Little, Brown).
1996 *Kinds of Minds: Towards an Understanding of Consciousness* (New York: Basic Books).
- Donald, Merlin
1991 *Origins of the Modern Mind: Three Stages in the Evolution of Culture and Cognition* (Cambridge: Harvard University Press).
- Duchan, Judith F., Gail A. Bruder, and Lynne E. Hewitt
1995 *Deixis in Narrative: A Cognitive Science Perspective* (Hillsdale, NJ: Lawrence Erlbaum).
- Franchi, Stefano, and Güven Güzeldere, eds.
1994 "Bridging the Gap: Where Cognitive Science Meets Literary Criticism." Special issue, *Stanford Humanities Review* 4(1).
- Gerrig, Richard J.
1993 *Experiencing Narrative Worlds: On the Psychological Activities of Reading* (New Haven, CT: Yale University Press).
- Gibbs, Raymond W., Jr.
1994 *The Poetics of Mind: Figurative Thought, Language, and Understanding* (Cambridge: Cambridge University Press).

- Hart, F. Elizabeth
1998 "Matter System, and Early Modern Studies: Outlines for a Materialist Linguistics," *Configurations* 6: 311-43.
- Holland, Norman
1988 *The Brain of Robert Frost* (New York: Routledge).
- Lakoff, George, and Mark Johnson
1999 *Philosophy in the Flesh: The Embodied Mind and Its Challenge to Western Thought* (New York: Basic Books).
- Pinker, Steven
1994 *The Language Instinct* (New York: W. Morrow).
- Rubin, David C.
1995 *Memory in Oral Traditions: The Cognitive Psychology of Epic, Ballads, and Counting-out Rhymes* (New York: Oxford University Press).
- Schank, Roger C.
1995 *Tell Me a Story: Narrative and Intelligence* (Evanston, IL: Northwestern University Press).
- Schank, Roger C., and Robert P. Abelson
1977 *Scripts, Plans, Goals, and Understanding: An Inquiry into Human Knowledge Structures* (Hillsdale, NJ: Lawrence Erlbaum).
- Shen, Yeshayahu.
1992 "Cognitive Aspects of Metaphor," *Poetics Today* 13(4): 567-74.
- Snyder, Gary
1999 "The Fiftieth Millennium," *Resurgence* 192 (January/February): 12-15.
- Spolsky, Ellen
1993 *Gaps in Nature: Literary Interpretation and the Modular Mind* (Albany: State University of New York Press).
- Tsur, Reuven
1992 *Toward a Theory of Cognitive Poetics* (Amsterdam: North-Holland).
- Turner, Mark
1991 *Reading Minds: The Study of English in the Age of Cognitive Science* (Princeton, NJ: Princeton University Press).
1996 *The Literary Mind* (New York: Oxford University Press).