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Cognitive poetics

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Introduction

In my most recent work on aesthetic cognition (Freeman 2020), I have adopted the term *poetic cognition* to replace 'cognitive poetics' as a more accurate way to reflect poetics as a feature of cognition, rather than the implication that there might be a poetics that is not cognitive. 'What is cognitive poetics?' This is a question I am invariably asked when I have to say what I do. It is a difficult question to answer because it means different things to different people. In its narrowest sense, *poetics* literally refers to the study of poetry. For example, Tsur's theory of cognitive poetics (1992 and 2008) focuses on ways in which human cognitive processing constrains and shapes both the language and aesthetic form of poetry and readers' responses to them. In a more general sense *poetics* (from the Greek term *poesis*, 'making') refers to the study of all the arts. Within this broader definition, further discriminations are made. For example, Semino (10 July 2012) focuses on linguistic creativity and interpretation:

> Cognitive poetics combines the detailed analysis of linguistic choices and patterns in texts with a systematic consideration of the mental processes and representations that are involved in the process of interpretation. Within cognitive poetics, literary reading is assumed to involve the same mental processes and representations that are involved in comprehension generally. However, special attention is paid to linguistic creativity and its interpretation, since creativity is a central part of the literary experience (even though it is not an exclusively literary phenomenon).

If *poetics* may be understood in several ways, the same is true for *cognitive*. Traditionally, the term *cognitive* refers to the rationalising, conceptual processes of the human mind that are based in logic and true/false dichotomies. However, with the rise of the cognitive sciences that include cognitive psychology, cognitive neuroscience, cognitive physiology, cognitive anthropology, and so on, researchers increasingly recognise that the human mind/brain/body interface involves much more than conceptual reasoning; conceptual reasoning itself can be seen to be both motivated and affected by processes and phenomena that include bodily sensations, emotions, feelings, memory, attention, imagery, metaphor, and

 DOI: 10.4324/9780367568887-23

analogous thinking. Spolsky (16 July 2012) focuses on cognition in her description of cognitive approaches to the arts as:

> an anti-idealist, anti-Platonist enterprise that entails the following assumptions: 1) the embodiment of the mind-brain both enables and constrains what humans can think, know, believe, do; 2) human works, including works of art, are attempts to extend the boundaries of what can be controlled, known, understood by imaginative re-representations in many media; 3) any study of cognitive issues in a specific work of art must be historically sensitive to the contexts of its creation and reception.

The role of cognition in the literary arts long precedes the rise of the cognitive sciences, especially in philosophy, from Aristotle's *Poetics* and *The Art of Rhetoric* to aesthetic theories in the eighteenth century (see Chapter 1 in this volume for more on this). In the twentieth century, Ingarden (1973, p. 4) addresses two questions: '1) How is the object of cognition – the literary work of art – structured? and 2) What is the procedure which will lead to knowledge of the literary work; that is, how does the cognition of the work of art come about and to what does or can it lead?'. Both questions combine a literary critical focus on product with a scientific focus on process. This combination has led to a more general approach than is captured in terms like poetics, stylistics, or rhetoric, reflected in the title *Cognitive Literary Studies* (Jaén and Simon 2012).

Another focus of cognitive poetics resides in its emphasis on the aesthetic effects of human creativity on human cognition. My own research attempts to explain the subliminal cognitive processes by which we experience a poem through its imagery, language and prosody. These processes are not merely or even primarily conceptual: the aesthetic elements of sensations and emotions that we articulate as feelings enable us to experience poetry (and for that matter all art forms) as *the semblance of felt life through forms symbolic of human feeling*. As Abram (1996) has noted, we in the Western tradition have suppressed the fact that we are part of sensible nature, have divorced ourselves from our ancient sensuous and emotional connections to the material life-world. It is noticeable that story and song figure prominently in Abram's accounts of pre-literate societies. The arts provide the means whereby, without losing sight of the many achievements of scientific methodologies, we can reconnect with the subliminal, precategorial and primordial interactions with the larger life-world of which we are a part. Studies of the arts thus illuminate these aspects of human cognition. At its best, cognitive poetics is Janus-faced, looking toward both the aesthetic text and the embodied mind. In so doing, it offers the possibilities of contributing toward both a cognitive theory of the arts and a theory of the embodied mind.

Historical perspectives

Cognitive poetics is a fairly recent development in studies of cognition and literature. The term has a somewhat complex history. Tsur (1992) outlined a theoretical approach to prosody based solidly in a wide range of interdisciplinary fields, including Gestalt psychology, Russian Formalism, New Criticism, literary criticism in general, linguistics, and neuroscience. A separate strand was meanwhile developing in the mid 1990s. Unaware of Tsur's use of the term, I began to use 'cognitive poetics' to describe my own interdisciplinary approach to poetry, following Tabakowska's (1993) seminal application of cognitive linguistics to literature (Freeman 1998, 2007b, 2008). Another theoretical strand arising from conceptual metaphor studies in cognitive linguistics gave rise to Lakoff and Turner's (1989)

More than Cool Reason: A Field Guide to Poetic Metaphor. This strand broadened into further studies as a result of Fauconnier and Turner's (2002) work in conceptual integration theory, or 'blending' (see Chapter 18 in this volume). This cognitive linguistic emphasis is reflected in Semino and Culpeper (2002) and in Stockwell's (2002) textbook, with its companion volume by Gavins and Steen (2003). The cognitive linguistics approach has thus tended to dominate as a description of the term, as evidenced by my survey in *The Oxford Handbook of Cognitive Linguistics* (Freeman 2007a). More recently, Brône and Vandaele (2009) specifically explore the interface between cognitive linguistics and cognitive poetics.

Yet another strand emerged from a more general interest in the relation of cognition, reflected in the multidisciplinary approaches of cognitive science to literary studies (Crane 2000, Crane and Richardson 1999, Hogan 2003, Spolsky 1993), along with work in cognitive psychology (Gardner 1982, Holland 1988, 2009), cognitive rhetoric (Oakley 1997, Turner 1987), cognitive narratology (Emmott 1997, Fludernik 1993), text-world theory (Gavins 2007, Werth 1999), cognitive stylistics (Burke 2011, Semino and Culpeper 2002), cognitive archaeology (Mithen 1996), evolutionary psychology (Boyd 2009, 2012), and cognitive neuroscience (Dehaene 2009). Such explorations have expanded the role of cognitive poetics to include other theoretical perspectives and all literary texts and artistic works.

Critical issues and topics

The question arises from this history as to whether cognitive poetics in its current state is a general movement, a clearly delineated field of study, or, as Tsur's title suggests, a theory. Tsur (2008) attempts to characterise what cognitive poetics is (or might be), and how it is similar to, or differs from, other cognitive approaches to literature. He shows, quite persuasively, how Lakoff's theory of conceptual metaphor cannot adequately account for the literary use of metaphor. He challenges Stockwell's adoption of the term *cognitive poetics* by focusing on what is meant by 'cognitive'. Tsur notes that the *products* of human cognitive processes are not themselves cognitive. In practising cognitive poetics, Tsur argues, one needs to explore the cognitive processes or mechanisms by which writers create and readers respond to literary texts, and to show how they illuminate poetic effects.

Tsur (2008, p. 623) acknowledges that 'Cognitive poetics is not a homogeneous enterprise'. The differences among the various approaches lie in the kinds of questions one asks, and the ways in which one explores the cognitive processes at work in experiencing literature. One major difference is whether the focus is primarily on interpretation or on experience. Sweetser's (2006) study of versification in *Cyrano de Bergerac*, Tsur argues, is meaning-oriented as opposed to his own gestalt-oriented approach that considers the play's versification from the perspective of the perceptual qualities it generates. In his conclusion, Tsur makes the important point that his theoretical framework does away with the form-content distinction that underlies Sweetser's study. Like Sweetser, Hiraga (2005) also maintains this distinction in her work on metaphor and iconicity. In my own work, I propose a theory of poetic iconicity that does not depend on a form-content dichotomy.

By focusing on the ways in which research in the cognitive sciences can contribute to the study of literature, Tsur's approach demands a consideration of literary critical approaches in helping to distinguish artistic expressions from everyday discourse. Whereas cognitive science research in general focuses on features common to all human cognition, cognitive poetics is concerned with what differentiates literary from conventional creativity. It highlights those aspects of cognitive processing that the cognitive sciences need to consider in understanding the full scope of human cognition.

Bergs (2009) has identified ten areas in cognitive poetics that need theoretical development from a cognitive linguistic perspective. These include: the different expectations common readers and literary experts have in responding to literary as opposed to conventional texts; empirical studies that go beyond statistical data; literature's aesthetic qualities and its openness to variable meanings; the importance of contextual grounding, as in historical and genre studies; the various effects of linguistic and cognitive elements influencing memory in the processing of replicable written texts as opposed to spoken utterances; and the development of integrative theories that move beyond simply recognising correspondences between findings in the cognitive sciences and literary studies. Already interdisciplinary as these agendas are, they overlap with various approaches in psychology, neuroscience, empirical literary research and historical/genre studies, among others. Studies in evolutionary psychology, for example, raise important theoretical questions as to the role of the arts in the development of the human mind; research in the neurosciences explores imaginative creativity in brain function; empirical/experimental studies provide evidence for theoretical hypotheses on literary reading; studies of metalinguistic effects of prosody focus on the affective aspects of the sensuous and the emotional in human cognitive processing; research in the cognitive sciences and the humanities explores integrative links between them. The challenge for cognitive poetics is how to incorporate these questions and issues into an aesthetic theory for literature that also links to an overall aesthetic theory of the arts in general. As a result, I now refer to 'cognitive poetics' as 'poetic cognition', recognising it as one aspect of the various forms human cognition takes (Freeman 2020).

Current contributions and research

Given the many areas that fall under the scope of poetic cognition, I have selected eight categories that reflect current research from various perspectives, all of which develop theories that integrate research in human cognitive processing and literature and the arts.

Literary creativity in the evolution of the human mind

Theorists of human cognitive development commonly assume that the arts are by-products of the human mind, emerging after the more direct needs for tool-making, social communication and survival have been satisfied. Boyd (2009), for example, who calls his speciality 'evolutionary literary criticism', or 'evocriticism' for short, does not see creativity as necessary for evolution, but rather the development of 'cognitive play', and considers both art and science as 'unnatural' adaptations. For Boyd, apparently, 'creativity' is equivalent to 'originality' or 'novelty'. In *Why Lyrics Last* (2012, p. 14), he describes the specific ability to play with language patterning in non-narrative lyrics as not needing 'extra cognitive design' that would trigger adaptation. Such assumptions are challenged by other cognitive research. Turner (1996) establishes, through close analysis of the principles of story, projection and parable, that these mechanisms of mind not only preceded human language but were necessary for its development. Whereas Boyd focuses on art as *product*, which encourages the idea of its emergence as post-cognitive, Turner focuses on the creativity of art as cognitive *process* that is needed for human thought to emerge at all.

The distinction between Boyd's and Turner's approaches is reflected in Benedetto Croce's argument that the *products* of art are not the *works* of art: 'If we take an aesthetic production, say a recognised work of art, we generally mean by expression the translation of the artist's vision into physical phenomena – colours, shapes, or sounds. … The works of

art are the aesthetic activity. The true artistic expression is never anything physical, on the contrary it is the aesthetic mental synthesis, and it is independent of outward translation, however necessary this translation may be for its communication' (quoted in Carr 1917, p. 162). Miall (2006, pp. 190–191) makes a similar point in contrasting content-directed approaches to the evolutionary significance of the arts with functional approaches of aesthetic activity such as dehabituation through foregrounding.

Arguing that the 'literary mind is the fundamental mind', Turner (1996, p. v) claims that 'the central issues for cognitive science are in fact the issues of the literary mind'. These issues are further explored in Turner (2006), with essays written by researchers in linguistics, semiotics, psychology, and the neurosciences that reflect just some of the extensive work being done in exploring the cognitive bases of human thought and creativity.

Mithen (1996, p. 194) provides forensic evidence from archaeological discoveries to reconstruct the evolution of the modern human mind, arguing that art emerged as the product of a cognitive fluidity in the human brain that occurred in a cultural explosion beginning at different times in different populations between sixty thousand and thirty thousand years ago. Although 'the three cognitive processes critical to making art – mental conception of an image, intentional communication and the attribution of meaning – were all present in the Early Human mind', it was not until these isolated cognitive processes began to function together that the modern human mind emerged (p. 162). Mithen's argument for the emergence of cognitive fluidity through a generalised intelligence that integrated the earlier specialised but isolated intelligences provides independent evidence for Turner's (1996, p. 57) argument that the modern human mind emerged as the result of projection of story in parable, the 'complex operations of projection, binding, linking, blending, and integration over multiple spaces' that enable human creativity to occur.

Mithen's and Turner's perspectives suggest that aesthetic cognition is by no means a luxury or afterthought in human cognitive development. Mithen's cognitive fluidity thesis provides a means whereby the imaginative faculty can be seen as a crucial and critical element not only for the arts, but for the development of language, the sciences and religion. In its explorations of the cognitive processes engaged in producing and responding to the arts, poetic cognition is in a position to provide further illumination into these aspects of the human mind.

Literature and neuroscience

Mithen's cognitive fluidity thesis is supported by recent neuroscientific research into brain processes. Although the origins of conscious awareness are still little understood, research on the neural workings of the brain illuminates the nature of the literary skills we possess. For example, the emergence of cognitive fluidity in the brain may have enabled the transposing of sensory perceptions into visual forms. As Abram (1996, p. 138) notes, 'iconic writing systems – those that employ pictographic, ideographic, and/or rebuslike characters – necessarily rely, to some extent, upon our original sensory participation with the enveloping natural field'. Alphabetical writing systems depend upon tight neurological connections in the brain between the senses of sound and sight. Dehaene (2009, pp. 318–319) describes modern research experiments by both psychologists and neuroscientists that identify specific regions of the brain that are specialised for letter identification and interpretation. Learning to read enables the brain to develop multiple neural pathways among these regions to link visual recognition with oral pronunciation and semantic, lexical meanings. These pathways do not work in linear fashion, but rather act in recycling simultaneity of network activation

in the enlarged prefrontal cortex of the human brain. Holland (2009) explores the ways in which these multiple pathways interconnect across both hemispheres of the brain in literary reading. He provides extensive evidence from a wide variety of research in psychology and neuroscience to establish the role of the right hemisphere in integrating the processing of prosodic features, emotions and literary devices with the recognition and decoding capacities of the left hemisphere. Kane (2004, p. 22) suggests that 'the degree of right-hemispheric involvement in language is what differentiates "poetic" or "literary" from "referential" or "technical" speech and texts'. These studies provide important justification for the role of the arts in developing human brain capacity. Holland (2009, p. 359) notes that

> when our brains work in special ways to create or re-create a literary work, we can freshly sense our selves and our world, relish our language, and confront our feelings toward one another. Fully engaged with and thinking through works of literature and the arts, we uncover our own individuality. We open ourselves to the largest truth of who we are, who we have been, and who finally we will be. In the last analysis, understanding a literary work means understanding our own humanity.

Cognition and poetics: Integration or exchange?

Relations between the sciences and the arts and humanities have suffered from several factors, among them the Cartesian confidence in scientific methodology as the only route to true knowledge, and the strict division between the natural world and the world of human affairs. What I call the Cartesian factor, for example, has led to two recent publications whose titles imply science's superiority to its weaker, subservient cousins: Slingerland (2008) and van Peer *et al*. (2012). A consilience workshop in 2008 attempted to counteract this one-way tendency, resulting in an edited volume by Slingerland and Collard (2012), which includes a section on approaches to literature. In a revealing afterword to this book, Harpham points out that it was only with the demise of philology, known as the 'Queen of the Sciences', in the twentieth century that literary studies took an anti-scientific turn. In urging non-consilience, Harpham concludes his afterword by describing an empirical study that was designed to discover, with EEG and fMRI technology, whether literary language forced the brain out of its customary routines to negotiate new pathways. This experiment, Harpham reports, discovered 'a new way of thinking about literary language, as the purest form of consciousness itself, "the best model brain science has to work from, if it is to capture the spontaneous living complexity of the human brain"' (Slingerland and Collard 2012, p. 430).

Meanwhile, Bruhn (2011, p. 447) takes a different approach to the relation between the sciences and arts/humanities, in which contributors explore, not integration, but 'a set of topics that are of central importance to both literary and cognitive research: affective, embodied, and distributed cognition; agency and intentionality; creativity and fictivity; genre; and metaphor … to illustrate a genuinely two-way exchange of considerable value – both immediate and indicative – for poetics and, even more so, for cognitive science'. The development of 4e cognition – embodied, embedded, enactive, extended – has generated much further research into these aspects of what I call human minding (Newen et al. 2018).

Most recently, Peter M. Rojcewicz (2021) has called for a major revision in educational pedagogy that would integrate the sciences and the arts more successfully than simply adding the Arts to the STEM (science, technology, engineering, mathematics) initiative. Such studies are perfect examples of poetic cognition's Janus-faced role, illuminating both literary language and human cognitive processing.

Empirical/experimental studies

Miall (2006) adds a new dimension to cognitive poetics in developing several methodologies for empirical research into the way readers respond to literary texts. Combining theoretical and experimental approaches, Miall describes several empirical strategies for exploring how readers read, as well as a methodology for identifying and modeling phonemic contrasts. Rejecting the simplistic notion that phonemes have intrinsic meaning, Miall's methodology nevertheless shows that systematic contrasts between phonemes in certain contexts trigger affective responses in readers that can motivate meaning. Claassen (2012) reports on empirical studies of how common readers construct images of authors in their reading. Recognising the distortions that result from reader-response tests in a laboratory environment, Burke (2011) emphasises the need to design experiments that reflect readers' emotional responses in the kind of environment in which they choose to read for pleasure. Burke (2011, pp. 254–255) focuses on three questions that arise from a reader's commitment to engage with a literary work: 'i) what role does emotion play in a cognitive event like literary text processing?, ii) which kinds of bottom-up and top-down inputs are most prominently involved in literary reading, and how do they interact in meaning-making?, and iii) what happens in the minds and bodies of readers when they experience intense or heightened emotions at literary closure?'. All three studies rely on quantifiable measures for determining readers' responses to literary texts, and focus on ordinary as opposed to expert readers. A different empirical strategy was employed in my qualitative study of the kinds of cognitive mapping strategies participants employed in a web-based forum during their readings of a Dickinson poem (Freeman 2002). These strategies, I discovered, partially depended on participants' level of education, their profession and their experiential background.

Cognitive linguistic approaches

Most writers on literature from a cognitive linguistics perspective who self-identify as practising cognitive poetics employ theoretical research in such areas as cognitive grammar, schema theory, conceptual metaphor and blending in their analyses, thus overlapping with cognitive stylistics approaches discussed in other chapters in this volume. The problems involved in differentiating cognitive poetics as a separate, independent research paradigm from these other approaches are outlined in Brône and Vandaele (2009), in which respondents to each article critically examine the work presented. The most recent contribution to cognitive poetics in this area is Wójcik-Leese (2010). In the first full-length cognitive poetics study of a single poet, Wójcik-Leese identifies a complex structuring metaphor, MENTAL LIFE/POETIC CREATIVITY IS AN EXPLORATION OF A VISUAL FIELD, in order to chart the movements of the poet's mind thinking. In reaching toward the cognitive processes that motivate the various drafts Bishop created as she worked on her poems, Wójcik-Leese (2010, p. 22) achieves the objectives of a cognitive poetics that relies on 'our awareness of the embodied mind, the cognitive unconscious, metaphorical thought, radial categories centred round prototypes, polysemy as a form of categorization, conceptual semantics and the encyclopedic nature of linguistic meaning'.

Affective studies

Missing from Wójcik-Leese's list is emotional affect. As Oatley (2003 p. 168) notes: 'Emotions have become the most interesting of current topics in psychology, cognitive science,

and neuroscience. In the same way, in cognitive poetics there was a relative neglect of emotions, but this phase too is passing.' Oatley's 'relative' is, I believe, a nod in the direction of Tsur's focus on the affective qualities of prosody. Tsur's primary aim in his extensive research spanning almost fifty years is based on the principle set out at the beginning of his seminal work (1992, p. 1):

> Cognitive Poetics … offers cognitive theories that systematically account for the relationship between the structure of literary texts and their perceived effects. By the same token, it discriminates which reported effects *may* legitimately be related to the structures in question, and which may not.

Tsur (2003, p. 37) identifies one assumption that underlies cognitive poetics: poetic texts display emotional qualities that are *perceived* by the reader; that is, these qualities are aesthetic, in that they display 'some structural resemblance between the sound patterns and emotions'. One central problem Tsur (2003, p. 116) addresses is 'how poetic language – which, like all language, is conceptual and linear – is able to convey experiences that are nonconceptual and non-linear'. This problem is related to the question of how the complex semiotic systems of poetry capture felt qualities through an indefinite number of verbal strategies when there is no one-to-one correspondence between them.

Tsur (1992, 2008) addresses these questions by distinguishing between convergent style, characterised by strong, articulated and stable shapes, and a divergent style that is more diffuse in expressing undifferentiated gestalts. These are linked, respectively, to high and low categorisation, which enable either rapid or delayed conceptualisation, and, in metaphor, to split and integrated focus. These cognitive processes shape and constrain language at every level: semantic, phonological, syntactic and prosodic. Literary styles can be identified by the extent to which they converge or diverge from high versus low categorisation, as can critical styles adopted by readers' preferences for either rapid or delayed conceptualisation. Delayed conceptualisation, with its propensity for open-ended possibilities, is the preferred strategy for appreciating the aesthetics of a literary text.

Aesthetic theory

The term *aesthetics* was coined in the eighteenth century by Alexander Gottlieb Baumgarten to describe a science of sensory perception that includes the arts (Freeman 2011, 2020). From the outset, aesthetics is associated with phenomenology, our sensory experiences of the external world, especially as characterised in the work of Merleau-Ponty. As Abram (1996, p. 124) notes: 'Merleau-Ponty's careful phenomenology of perceptual experience had begun to disclose, underneath our literate abstractions, a deeply participatory relation to things and to the earth, a felt reciprocity curiously analogous to the animistic awareness of indigenous, oral persons'. Art reflects this attachment through the activity of *poesis*. Croce (1953 [1909], p. 10) identifies artists not by a special kind of intuitive faculty, but by the fact that they are able to capture the qualities of sensation and impression: 'The painter is a painter, because he sees what others only feel or catch a glimpse of, but do not see. We think we see a smile, but in reality we have only a vague impression of it, we do not perceive all the characteristic traits of which it is the sum, as the painter discovers them after he has worked upon them and is thus able to fix them on the canvas.' Croce's description suggests that it is the activity of making that leads to

aesthetic discovery of the nature of reality. From the perspective of aesthetic cognition, I situate poetic cognition as a subset that focuses in particular on the literary arts, and have developed a theory of poetic iconicity that attempts to capture the essence of aesthetic experience (Freeman 2020).

Not all poetry is iconic. It becomes iconic for the reader when the reader responds emotionally to the forms of the poem (its metres, rhythms, sound patterns, structures, semantic networks of meaning) that carry the essence of its intentionality, purpose, motivation. When the term *iconicity* is used in cognitive linguistics, it usually refers to elements in language (semantic, phonetic, or syntactic) that reflect what is meant; that is, a semiotic intentional sign. Alexander Pope's line 'And ten low words oft creep in one dull line' is iconic because it contains ten words which are all monosyllables ('low') and eight of which carry heavy stress which weighs the line down and makes it monotonous ('dull'), so that the line is doing what it is saying.

This semiotic sense of iconicity occurs also in my theory of poetic iconicity. The difference is that in semiotics, any image is understood to be iconic. However, the popular use of the word *iconic* (and it crops up every day in newspapers, magazines and books) refers to something special, which is emotionally meaningful to a person or group. Yellow chequered taxicabs are said to be iconic of New York, the Eiffel tower of Paris, and so on. In this usage, something usually becomes iconic when it is meaningful to a community or nation, so that anything can become iconic. Bryson (2008) includes articles written by contributors who describe some element of England (places, people or things) that they find represents the essence of Englishness to them.

My theory draws from both semiotics and popular usage, as well as from phenomenology and aesthetics. It provides a model for identifying those forms in a poem that make it iconic, not just in the senses described above, but also to the extent that it makes immediate the essence of experienced reality. According to my theory, poetic iconicity is not purely subjective, in that any poem can become iconic if the reader thinks it is. The forms of the poem have to physically embody the impetus that led the poet to conceive the poem in just that way. Wallace Stevens' poem 'Of Mere Being' reflects the phenomenological sense of iconicity in this respect (Freeman 2007b, 2020).

4e Cognition

Increasingly, modern cognitive research, with its psychological and neuroscientific discoveries into the workings of the human brain, has begun to explain the role of our sensory, motor, and emotive experiences that underlie conscious awareness. Cognition is now understood by many cognitive researchers as being 'embodied'. The notion of embodied cognition implies the phenomenology of our being part of the world; that is, the way our entire bodily organism is animate as it both affects and is affected by the 'affordances' of its environment. Embodied cognition is thus also embedded, extended and enactive, what researchers call 4e cognition (Newen et al. 2018). A simplified description of 4e cognition means that cognition is:

- embodied: involving the entire body-self of the living system;
- embedded: including physical, social, and cultural aspects of the world;
- extended: mediating the mutual processes between the body-self and its environment;
- enactive: engaging with and synthesising affective exchange between the body-self and its environment.

My approach is not to plunge into the nature and disputes on how 4e cognition is constituted and functions (which is the main feature of *The Oxford Handbook of 4e Cognition* contributions), but how in general terms increasing awareness of the relations between affective-cognitive processes can illuminate our reading of literary texts. When we encounter a poem, we engage in active sense-making through all our cognitive functions: sensory, motor, emotive and conceptual.

Although some cognitive neuroscientists take the position that the physical brain is the source and 'controller' of all our thoughts and feelings, other cognitive researchers recognise that the brain is the organ or tool of the whole person, the 'self' that participates in and integrates with the world of which it is a part (Nöe 2009). That is, we are no longer understood to be objective observers of our universe, but rather cognitive beings that participate in interactive engagements with others, both human and natural, otherwise known as distributed affectivity (Stephan 2018, 615–616). The term poetic cognition thus refers to:

- human activity involving sensory-motor-emotive processes that are subliminal, below the surface of consciousness;
- conceptual thinking that brings these elements to conscious awareness;
- expressions of those activities through creative human artifacts and institutions, including language;
- interactive exchange with others in the exploring of multiple possibilities of understanding, with especial attention to the arts.

Main research methods and recommendations for practice

What differentiates poetic cognition from other stylistics approaches, I suggest, is its focus on exploring the ways in which aesthetic creativity can illuminate the workings of human cognition. Focus on prosodic effects inevitably results in exploration of the ways feeling (emotion and sensation) motivate expression. As I began to develop my theory of poetic iconicity, I incorporated methodologies drawn from Peircean semiotics (Hoopes 1991), Merleau-Ponty's (1962[1945]) phenomenology and Langer's (1953, 1967) theory of art, as well as tools developed by other cognitive researchers. On a practical level, in attempting a cognitive analysis, I first take the following steps (not necessarily in the order presented here and always cycling among them) in reading a Dickinson poem before reaching an understanding of what a poem might be saying and doing. It is important to note that the steps reflect one's experience of a poem's effects, not an interpretation of its meaning.

Intuiting aesthetic emotion

First readings provide an immediate response of engagement or otherwise. A poem's tone has emotional resonance, and is the preliminary indicator for cognitive creativity in understanding the poem.

Dickinson describes the south wind as bringing with it something foreign, and describes it in terms of response to the voice of a recent emigrant:

> A South Wind – has a
> pathos

Of individual Voice –
As One detect on
Landings
An Emigrant's address –
A Hint of Ports – and
Peoples –
And much not understood -
The fairer – for the
farness –
And for the foreignhood –

(Amherst College Archives, A 81-7)

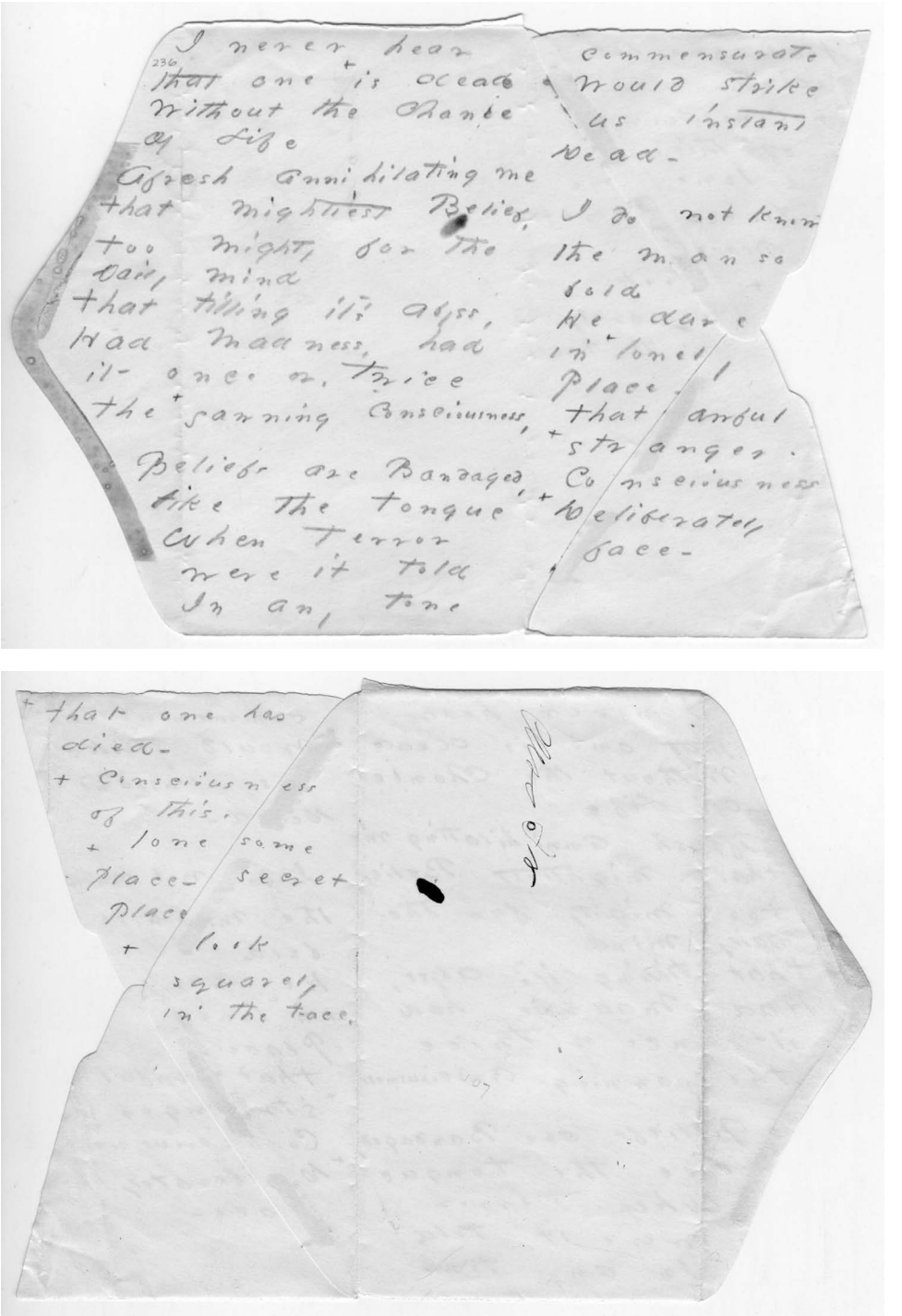
Several metaphoric mappings occur in this poem (brackets used to indicate conceptual mappings not given linguistic form):

[Sea]----------[Air]
Emigrant------Wind
Voice----------[Sound]
Address--------Pathos
Landings------[Location of Speaker]
Ports---------- Farness
Peoples-------- Foreignhood

The 'pathos' or emotional affect of the wind is described in terms of the 'address' of the emigrant, both in the sense of style of communication and of location, thus inferring the 'hint' of the emigrant's origin. The word 'emigrant' in itself invokes the place left rather than the place of arrival (compare 'immigrant'). There is the suspicion of synaesthesia, that it is not just the sound of the wind that is invoked but its movement and touch, the odors it brings. The speaker's location is different from the wind's origin, as 'Landings' are from the emigrant's, thus in the North, in New England, in Dickinson's Amherst. The total effect of the poem arises from the sense of a place that is far away, unknown, the language of the wind as little understood by the speaker as is the language of the emigrant. It is the distancing of the unknown, that which is not understood, which is 'fairer' in the blend that is the poem.

Looking closely at the text

The major problem in reading Dickinson's poetry is that it exists (except for a handful of poems) only in manuscripts, since the poet never personally oversaw her poetry rendered into print. As a result, her editors have necessarily had to make decisions on where lines break or run over, which of the many variant copies and alternate phrases to adopt, and how to regularize her various markings. Since the poems are now in the public domain, their manuscript images can be accessed online from Amherst College at https://acdc.amherst.edu/browse/collection/ed and from Harvard University at https://www.edickinson.org/. Seeing a manuscript is a very different experience from reading the edited print version. One poem was written on both sides of an envelope:



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I never hear
that one is dead
Without the Chance
of Life
Afresh annihilating me
that mightiest Belief,
too mighty for the
dain, mind
that filling its abyss,
Had madness, had
it once or twice
the scanning Consciousness,
Beliefs are Bandaged
like the tongue
when Terror
were it told
In any tone
commensurate
would strike
us instant
Dead-
I do not know
the man so
bold
He dare
in lonely
Place
that awful
stranger.
Consciousness
Deliberately
face-

that one has
died-
Consciousness
of this.
lone some
place- secret
place
look
squarely
in the face.

Figure 19.1 Manuscript courtesy of the Amherst College Archives A236

The second image shows the alternate versions for words marked with a cross. A transcript of the poem reads as follows:

I never hear
that one + is dead
without the Chance
of Life
Afresh annihilating me
that mightiest Belief /
too mighty for the
Daily mind
that tilling it's abyss /
Had Madness / had
it once or \ twice
the + yawning Consciousness /

Beliefs are Bandaged /
like the tongue
When Terror
were it told
In any tone

commensurate
would strike
us instant
Dead -

I do not know
the man so
bold
He dare
in + lonely
Place -
that awful
+ stranger
Consciousness
+ Deliberately
face -

+ that one had died -
+ stranger + Consciousness / of this /

+ lonesome / place - secret / place
+ look / squarely / in the Face \

Figure 19.2 Poem

Given the manuscript spacing, the poem divides into three stanzas. If you look at the arrangement of words in the manuscript, my intuition is that Dickinson wrote the variant *stranger* for *yawning* next to it and slightly below the line. Then when she moved to the side to write the rest of the poem, she simply wrote around it. Then on the other side, added her additional alternates. This explains 1) the fact that the cross by *stranger* has no other change offered and suggests 2) that the final stanza reads 'awful Consciousness' not 'awful stranger Consciousness' as the edited versions of the poem have it. Dickinson rarely, if ever, doubled adjectives before a noun, and if she meant *stranger* as a noun, she would have probably put a clearer mark after it – though it does have a line break.

Identifying prosodic features

The edited versions also include the slant markings as commas, which creates a puzzle regarding sentence structure. I see them as prosodic markings indicating a rise or fall in voice, following the rhetorical system Dickinson learned in school (Freeman 2023). Given the nature of the discussion, Dickinson may not have wanted definite periods because, according to my reading, the subject of the entire poem is *consciousness*. The word carries two kinds of meaning confirmed by her use elsewhere: the awareness we have in life, and the awareness of death with the 'chance' of immortality. That *chance* may be the eye of the poem (though I'm not there yet), since for ED that was the most challenging and disturbing aspect of our not knowing.[1]

Instead of trying to paraphrase the poem by restoring regular syntactic order to Dickinson's characteristic habit of transposing words and phrases, I first write out the poem without the line breaks and including the variants:

> I never hear that one + is dead [that one has died –] without the Chance of Life Afresh annihilating me that mightiest Belief / too mighty for the Daily mind that tilling it's abyss / Had Madness / had it once or \ twice the + yawning [stranger] Consciousness / [Consciousness / of this /]
>
> Beliefs are Bandaged / like the tongue When Terror were it told In any tone commensurate would strike us instant Dead –
>
> I do not know the man so bold He dare in + lonely Place [lonesome / place – secret / place] – that awful Consciousness Deliberately face – [look / squarely / in the Face \]

Writing out the poem in this way helps me see how to read it as given by introducing tones and pauses that 'reconstruct' the sound of the poem as Dickinson wrote it. As a result, I can see how the poem's structure confirms or invalidates my initial intuitions. I also discover that Dickinson's word-play of double meanings and associations is not restricted to the word *consciousness* alone. As I had initially thought, *that mightiest belief* is an appositional phrase to *chance of life*, thus confirming the idea that *life* also has double meaning: life on earth and life hereafter: immortality. Moreover, I can now see how *chance* might be the eye of the poem. It is not the idea of immortality per se that is a *belief too mighty for the daily mind*, but the fact of the nothingness of not knowing. That is the *abyss* (the chance of life / the mightiest belief) that if we 'till' it, it produces, with its double meaning of *harrow*, a *madness* in facing the *yawning [stranger] consciousness*.[2]

The variant, *consciousness of this*, makes clear that *yawning consciousness* refers to the *abyss* – of what? Does the attached possessive *it's* refer to the *daily mind* or to *the mightiest belief* or to *the chance of life*? Or, as characteristic of Dickinsonian cognition elsewhere, does it refer to all of them, with each in apposition to the other?

The following stanza, by picking up the word *belief*, introduces the notion that we tend to cover or gild our words to 'give a fair and agreeable external appearance' (Webster) to what would otherwise be a distasteful or horrendous comment to make to someone. And then the final stanza concludes by acknowledging our fear of facing the truth, the *awful consciousness* – of what? That we cannot accept the human condition of not knowing?

Recognising cognitive import

The interrelation of prosody and language reveals the underlying forces that capture the 'minding' that the poet creates and the reader re-creates in bringing a text to life.

I suggest that a cognitive reading is not simply another literary analysis. Rather, it provides the grounding for literary interpretation. For example, one could generalise the themes of this poem by elaborating the roles of consciousness of life and death by linking it to other Dickinson poems with similar semantic networks.

Evaluating a poem's success

For me, a poem's success lies in its ability to create a shiver up my spine. That occurs when I perceive how all its elements cohere to create poetic iconicity, the power to create a feeling of presence in the present moment enacted by the poem doing what it is saying.

A poem 'works' when its reader is drawn into emotional engagement with the world of the text and through it, the world of the poet. Dickinson's poems work for me because they 'make real' their statements through their prosodic structure. Cognitive analysis enables me to explain my intuitive feelings on first reading.

Future directions

So, then, how do I respond to the question, 'What is cognitive poetics?' Cognitive poetics – or rather, poetic cognition – is a way of looking at poetry as the product of an artistic process that utilises all subliminal regions of the brain: conceptual, emotive, kinesic and sensuous. By focusing on all aspects of poetic art, readers can come to understand a poem's wellsprings in the primordial, precategorial recesses of the brain/mind/body's self-identification with the life-world of which we are a part. The painter Peter London (2003) puts it well in his deliberately double-meaninged phrase: drawing closer to nature draws us closer to ourselves.

As the theory of poetic cognition continues to develop, I see it emerging as a more clearly defined field that relates artistic activity to human cognition in general. Along these lines, Bloomsbury Academic has inaugurated a book series on 'Cognition, Poetics, and the Arts' that seeks to further high quality interdisciplinary research at the intersection of cognitive sciences and the arts.

Related topics

Emotion and neuroscience, iconicity, metaphor and metonymy, rhetoric and poetics, text world theory

Notes

1 Haj Ross used to refer to a word or phrase as 'sore-thumbing' that, in sticking out like a sore thumb, points to the thematic crux of a poem. He now follows the Chinese expression, *eye of the poem*, to characterise the phenomenon. From Dickinson's copy of Webster's 1844 dictionary:

CHANCE, n. [Fr. *chance*; Norm. *cheaunce*; Arm. *chançz*; D. *kans*; G. *schanze*. This seems to be from the participle of the French verb *cheoir*, to fall, Sp. *caer*, from the L. *cado*, or directly from the Latin *cadens*, *cadentia*.]

An event that happens, falls out or takes place, without being contrived, intended, expected or foreseen; the effect of an unknown cause, or the unusual or unexpected effect of a known cause; accident; casualty; fortuitous event; as, time and chance happen to all. By chance a priest came down that way. – Luke x.

Fortune; what fortune may bring; as, they must take their chance.

An event, good or evil; success or misfortune; luck. – Shak.

Possibility of an occurrence; opportunity. Your ladyship may have a chance to escape this address. – Swift.

2 Webster is helpful in probing the possibilities of Dickinson's own minding. The verb *to till* also has the meaning *to harrow (*I've **boldfaced** the relevant descriptions):

TILL, v.t. [Sax. *tilian*, *tiligan*, to work, to toil, to cultivate, to prepare; W. *telu*, to strain. In G. *bestellen*, from *stellen*, to set, to put in order, has the sense of tilling, cultivating. These words are doubtless of one family.]

To labor; to cultivate; to plow and prepare for seed, and to dress crops. This word includes not only **plowing, but harrowing**, and whatever is done to prepare ground for a crop, and **to keep it free** from weeds. The Lord God **sent him forth** from the garden of Eden **to till the ground from whence he was taken**. Gen. iii.

In the most general sense, to till may include every species of husbandry, and this may be its sense in Scripture.

HAR'ROW, v.t. [Sw. *harfva*; Dan. *harver*.]

To draw a harrow over, for the purpose of breaking clods and leveling the surface, or for covering seed sown; as, to harrow land or ground.

To break or tear with a harrow. Will he harrow the valleys after thee? – Job xxxix.

To tear; to lacerate; **to torment**. I could a tale unfold, **whose lightest word. Would harrow up thy soul**. – Shak.

To pillage; to strip; to lay waste by violence. [Not used.]

To disturb; to agitate. [Obs.] – Shak.

Further reading

Gibbs, R. W., Jr., ed. 2008. *The Cambridge handbook of metaphor and thought*. Cambridge: Cambridge University Press.

A useful compendium of articles that describe some of the key developments in contemporary metaphor research, detailing the contribution of metaphor to human cognition, communication, and culture.

Harbus, A., 2012. *Cognitive approaches to Old English poetry*. Woodbridge, UK: D.S. Brewer.

This book offers a new approach to the study of Old English poetry by adopting key ideas from cognitive literary/cultural studies, cognitive poetics, and conceptual metaphor theory in conjunction with more familiar models derived from literary analysis, stylistics, and historical linguistics.

Hogan, P. C., 2011. *What literature teaches us about emotion*. Cambridge: Cambridge University Press.

This book integrates literary insights with work from neuroscience, psychology and philosophy, among other disciplines, in order to contribute to current interdisciplinary emotion research.

Johnson, M., 2007. *The meaning of the body: Aesthetics of human understanding*. Chicago and London: The University of Chicago Press.

A major contribution to research into aspects of embodied meaning and cognition that involve qualities, feelings, emotions, and temporal processes, this book argues for the arts as giving form, significance, and value to our lives.

Robinson, J., 2005. *Deeper than reason: Emotion and its role in literature, music, and art*. Oxford: Oxford University Press.

This book takes the insights of modern psychological and neuroscientific research on the emotions and brings them to bear on questions about our emotional involvement with the arts.

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