Thinking with the body: Feeling in literary reading

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A second cognitive revolution has recently been underway, impelled by new research on what is being termed “embodied cognition,” from the discovery of mirror neurons and other advances in neuropsychology. In this presentation I consider how our view of literary reading is enriched by such research. Central to this development has been recent thinking about feeling among psychologists and neuropsychologists. A significant shift in understanding of the relationship of cognition and emotion has led to the “primacy” of emotion being widely accepted. A cognitive process without emotion is understood to be deficient, lacking direction, as cases of patients with frontal lesions studied by Damasio (1994) have demonstrated. At the same time, the implications of this new perspective on emotions has had little impact, as yet, on our understanding of literary reading. A few extended studies argue for and adopt this perspective (Opdahl, 2002; Altieri, 2003; Robinson, 2005; Miall, 2006), but so far it has had little impact either on studies of literature in the paradigm of cognitive poetics or on empirical studies of literature (see, however, Burke, 2001; Hogan, 2003). Here I will discuss some implications for literary aesthetics: the early influence of foregrounded features on readers (what Reuven Tsur terms precategorial effects: 2008, 4), the absence of agency in the first phase of feeling, the sense
of disinterestedness that contributes to the experience of literariness, and the bodily processes
that underlie our empathic powers as readers.

One of my aims here is to investigate what may be distinctive to the literary experience,
what Jakobson (Erlich, 1981, 172) and others have termed “literariness.” The sense of
literariness appears to depend on the interaction of the reader with a text, in the sense that a text
that provides affordances for a literary reading is experienced by a reader willing to engage in
certain kinds of cognitive play and an openness to the interaction of feelings. This may result in
shifts in cognitive functions (such as schema refreshment: Cook, 1994, 191-3) and the modifying
of the reader’s sense of self.

Here, in a little more detail, is how the processes involved in literariness might unfold.
To illustrate them, this is the opening of a story we have used several times in our empirical

One of the first places Julia always ran to when they arrived in G- was The Dark
Walk. It is a laurel walk, very old, almost gone wild, a lofty midnight tunnel of smooth,
sinewy branches. Underfoot the tough brown leaves are never dry enough to crackle:
there is always a suggestion of damp and cool trickle.

She raced right into it.

The literary affordances made possible in this passage belong to at least two categories:
foregrounding (stylistic effects at the word and phrase level) and empathy (recognition of a
protagonist, Julia, whose interests we may be called upon to monitor). Foregrounding is
apparent at several points: the unusual abbreviation of the name, “G---”; alliteration of /n/ in the
second sentence; the metaphor “lofty midnight tunnel”; the consonance in the third sentence of
“crackle” and “trickle.” When sentences such as these contain a cluster of foregrounded features
at the phonetic or semantic level or both they solicit a certain kind of attention from readers: as our studies have shown, most readers agree that such a passage is striking and evocative; their comments suggest that aspects of the passage, because they are evocative, are imbued with a distinctive kind of feeling (which may or may not be familiar to the reader), and that the passage may already call up a memory – such as a place the reader used to visit, or a rendering of a similar scene in a movie or a novel. Because the possible protagonist, Julia, has just been introduced in the first sentence, and because we are told that she always ran there first, the reader is likely to infer that The Dark Walk is familiar to Julia and that the description that follows is from Julia’s perspective. As early as the second sentence, then, a reader who is attuned to these effects is ready to empathize with Julia; the world of the story, for that moment, will be experienced from her point of view: that is, her perceptions and her feelings will guide the reader’s response – how the unfolding scenes and events will be evaluated, and what the reader will anticipate as a plausible outcome for the story overall. This much is established from our previous empirical studies (Miall & Kuiken, 1994, 1999), where we have collected reading times per sentence, or ratings for strikingness and feeling, or asked readers to think aloud as their responses to the story developed. The presence of foregrounding predicts each of these aspects of the reader’s response.

What does research on embodied cognition add to this picture? First, it suggests the importance of temporal ordering in the response to foregrounding, and that the primary vehicle of response is feeling. Since consciousness gains access to the response only some 350 ms or later downstream (Damasio, 1999, 127), the complex of feelings, perceptions, or memories that is evoked organizes the reader’s response before any deliberate intention can intervene to shape response in preferred or authorized ways. This picture is, perhaps, too simple as it stands; but it
suggests that, at least at certain times, reading may enter into and begin to reshape a reader’s unconscious network of feelings and memories, and initiate the shift in self-perception that literary reading can sometimes accomplish.

Second, the empathic process has more than one dimension. A core finding of embodied cognition is that the same brain regions are active, for example, both during visual experience of an object and when the object is present only in a mental image; similarly, performing an action, observing an action, or imagining the action activate the same neurons in the premotor area. Even reading a sentence or a word denoting action activates appropriate premotor neurons, although here, as in the other conditions I mentioned, actual movement is forestalled by an inhibitory response. These findings indicate that when the story states that Julia “always ran to” The Dark Walk, or that “She raced right into it,” these action verbs not only enable readers to form an image of Julia’s behaviour, but also actively to experience her running for themselves in the premotor cortex, with the feelings this also evokes, albeit probably below the level of consciousness. The feelings associated with running are likely to evoke either specific or generic memories of running by the reader, situated within the youthful stance towards the world that Julia’s behaviour suggests. At this level, then, occurs the simulation of Julia’s behaviour and feelings in the reader’s own experience that we call empathy. As Becchio and Bertone (2005) put it: “When observing other people acting, the activation of shared neural representation allows us an immediate access to their motor intention” (21). Since text representations of people acting evoke a similar response, Julia’s intentions must become an issue for the reader as the first action verb is read. At the same time, memories of running, in their turn, may cue the reader’s own intentions in relation to some experience or event from their own lives, perhaps promoting the salience of a concern or striving that is currently unresolved. Thus Julia’s
intentions and the reader’s intentions are put into play in parallel, in ways that may support or conflict with one another – a phenomenon that I will term the intention variance effect. This is the first of several variance effects that illuminate the nature of literariness, as I will mention in more detail below.

The empathy issue is more complex than this, however. If the reader empathizes with Julia’s actions and perceptions, the representation of The Dark Walk that we suggested was seen from Julia’s perspective must also provide occasions for empathy. Through Julia’s observation of the “lofty midnight tunnel,” or the “smooth, sinewy branches,” we also confront natural objects that evoke their own specific feelings, which in themselves hint at their independence and possible intentions. This is most apparent in the phrase “smooth, sinewy branches,” which gives the branches a degree of animation. Whether through perception or action neurons, then, a second level of empathy is invoked by taking on Julia’s response to The Dark Walk through which we encounter hints of animate powers (this animist hint will become more concrete later in the story when Julia finds a trout trapped alive in a small pool). Once again we can envisage the reader’s own feelings activating links to associated memories or experiences that bring the reader’s intentions into play; and since these will likely engage a perspective different from that of Julia, we can also suppose that the reader’s response to The Dark Walk will provide another example of the intention variance effect, helping, as before, to motivate the reader’s subsequent response by putting the reader in a critical relationship to Julia’s history.

Many studies of embodied cognition have shown that observation of the actions of another is paralleled in the observer by activation of the premotor area. Similarly, it has been shown that observation of facial expressions of emotion activates the same emotion circuits in the brain of an observer, and the observer may unconsciously imitate the other’s emotional
expression, a phenomenon that has been termed emotional contagion. This effect is strongest with conspecifics, that is other human beings, through what Gallese (2003) calls “the shared manifold of intersubjectivity.” But there is reason to think that such parallels also occur in the human response to monkeys or dogs (experimental studies have demonstrated this); and that we are ready to endow animism on lower animals, insects, trees, or clouds. A well-known phrase coined by the poet Keats, “negative capability,” partly captures this insight; he refers to how he becomes absorbed in the life of a sparrow, and will “take part in its existence and pick about the gravel” (Keats, I, 186). As I mentioned earlier, response to foregrounded features in terms of feeling and the attribution of intention occurs rapidly, a complexity of response prior to consciousness, thus, prior to exercising the rational capacity that would (perhaps) dismiss such animate interpretations. This possible conflict between animate and inanimate readings, occurring after the onset of object or event consciousness, is the source of a third intention variance effect – in this case, rather than a conflict of intentions, it complicates our response to lower or non-sentient forms, to which we either allow or deny intention. This constitutes another important contribution to our experience of literariness in this context (Julia in The Dark Walk; other stories will offer different approaches to setting that will invoke their own intention variance effects).

A fourth intention variance effect, one that contributes significantly to the experience of literariness, arises from the question of agency. This takes two specific forms, which I will introduce separately. First, in relation to the discourse on mirror neurons – but not confined to this area – several reports have raised the issue: if neural representations of an action in the observed and the observer are the same, this implies what Fischer and Zwaan (2008) have called “independence of perspective” (830); that is, the action viewed from the perspective of either
participant appears the same. Gallese (2003) makes the same point, referring to it as an
“indifference to perspective, i.e., to self-other distinctions” (172). Becchio & Bertone (2005) put
the issue, most pertinently for our purposes, in terms of agency. The familiar question, how can
we know the other, is reversed: rather, the question is “how one can distinguish one’s own action/intention from those of other people?” (21). As they go on to point out, “Being constructed in a
multisubjective agent-free format, the action representation is immediately shared between self
and other” (23). If the same representation is active in two brains, how do we distinguish the
“I”? The issue has a temporal dimension, since attribution to self may follow: “the starting point
is an objective, agent-free representation,” they claim. “Motor intentions are first shared, and
only in the second place attributed” (28).

The question for present purposes is whether this initial absence of agency also pertains
in the reading situation. Evidence for activation of mirror neurons by text argues that it is. Thus,
as Lisa Zunshine (2003) puts it, on some level works of fiction manage to “cheat” our perception
and action mechanisms into “believing” that they are in the presence of material that they were
“designed” to process, i.e., that they are in the presence of agents endowed with a potential for a
rich array of intentional stances (273). The substantion of agency in a character, however, occurs
downstream from our first response to what we encounter on the page. Our response thus
consists of two phases: experience of occurrences in an “agent-free format” followed by
secondary processes that identify the agent of the occurrence. We will refer to this as the agency
variance effect, and consider later how it provides an important basis of literary experience –
even while we remain aware that as readers we are not the other, and that empathy may involve,
as Carroll argues (1997, 200), awareness of significant differences in feelings, perspective,
experience, or situation from the represented character whose fate we are following.
Agents are motivated: readers track who does what and why in a story; but the enactive view of agency, as promoted by Ellis (2003), argues that feelings and emotions are at the basis of all behaviour. The second, more specific aspect of the agency issue thus involves feelings, what we might call the feeling-agency variance effect. As before, this depends on temporal process, with agency for a feeling unattributed in the first few hundred milliseconds of onset; however, the unattribution condition appears to be more robust and persevering in the case of feeling, and to continue to exist alongside or in alternation with the attributed condition. This is one of several paradoxes of feeling that characterize literary response (for others, see Miall, 2006, Ch. 6). The question of agency in feeling is raised by several studies that have demonstrated mirror neuron circuits for a particular emotion, for example, disgust or pain (Rizzolatti and Sinigaglia, 2008, 181). In addition, the rapidity with which feeling responses unfold, with fear or startle occurring some 10-20 ms following stimulus onset in the amygdala (Le Doux, 1996, 163), argues that the more complex process of self-attribution occurs later.

The unattributed condition, the sense of an emotion without agency, seems due in part to the prototypical aspect of emotion. Nussbaum (2001), for example, contrasts two levels of emotional response to fiction: when we feel pity at a certain moment for a particular character we also feel the significance of pity that exists in the world generally (245). A similar distinction is made by Kenny (1963) between the formal object of an emotion (that property of an event that elicits the emotion), and the particular object (the event itself) (62). This is a type/token distinction: a given emotion is experienced in its immediacy and particularity (the token), but at the same time we may (although not always) be aware of its larger significance, its existence as a type of emotion that takes other forms at other times. Hogan (2003) offers a version of this distinction, referring to the second type as the prototypic basis for understanding emotions (see
also Prinz, 2005, 72-73): in identifying an emotion that we see someone experiencing, he says, “we do so by comparing his/her situation with prototypical situations and his/her response with prototypical responses” (83); the person in question is, of course, experiencing at that moment a particular instance (or token) of the emotion. Lazarus (1991), without using the term, suggests prototypes in his concept of the “universal rule” for emotions within people or within the sociocultural situation (176). He observes that across history and different cultures “the same basic themes and emotions seem to recur” (191). As readers, a sense of the prototypical significance of an emotion is likely to occur to us from time to time. It may become the principle instrument by which we come to understand a literary work as a whole: the destructive effect of jealousy in Othello; the indignation at his daughters’ ingratitude that seizes King Lear and leads to his madness. As we watch we are educated in the energies of such an emotion, able to overtake the individual in spite of what he does or thinks. The emotion is thus both a particular response attributed to a character at that moment, and an agent of destiny unfolding in the character despite his or her intentions. The Laws of Emotion set out by Frijda (1988) also show how emotions may exercise agency and take precedence regardless of, or in conflict with, the intentions of the individual.

So far I have been arguing that literariness necessarily involves interaction between a reader and a text offering literary affordances, whether this lies in the response to foregrounding or the relation to a character whose perspective engages our interest. More specifically, during reading certain paradoxes, or divergences of perspective seem to characterize literary response. These are apparent especially in terms of the temporal aspects of response, in which key components unfold in the first few hundred milliseconds, prior to conscious awareness. With some suggestions from research in embodied cognition, I have proposed that literary reading is
governed, in part, by what I called intention variance effects: response is ambivalent, or may hesitate between alternative sources of intention, and does so in four ways:

intention variance effect, 1: character’s and reader’s behavioral intentions alternate or may conflict;

intention variance effect, 2: setting evokes both reader’s and character’s intentions (evoked in “The Trout” by possible animism) that alternate or may conflict;

intention variance effect, 3: animate reading (attitude of “negative capability,” intimating intentionality) contrasts with inanimate readings of environment;

intention (agency) variance effect, 4a: action unattributed, with delayed attribution of agency;

intention (feeling) variance effect, 4b (a component of agency): feeling unattributed or attributed to an agent; feeling as a prototype may persevere.

If this account is correct, a key component of literariness thus lies in the multiple perspectives on the text generated online in the reader – in particular, given the temporal aspects I have mentioned, those perspectives that are evoked prior to consciousness; these help to create that sense of resonance, a mood or ambience, that gives literary reading its sense of more than can be known, its intimations of experience at or beyond the horizon of understanding. Yet, a sense also that the reader has become personally implicated in the reading. Contributing to this pre-conscious process, then, is the resonance of various story elements with the reader’s feelings, memories, or judgements, thus creating the possibility that the reader’s current concerns or strivings in some respect become a significant component of the literary experience and may, as a result, be modified during the course of reading.
It may seem that this multiplicity of perspectives is an echo of the New Critical emphasis on ambiguity, tension, and paradox. A major difference, however, lies in the involvement of the reader in the present account. The New Critics attempted to define literariness primarily in formal terms, and precluded appeal to the reader’s experience with rare exceptions. For example, in their *Theory of Literature* Wellek and Warren comment that literary language “wants to influence the attitude of the reader . . . and ultimately change him” (1976, 23); but this does not authorize study of actual readers and whether or how they change. In contrast, the reader in my account is a full participant in the reading process being considered, and careful, systematic study of actual readers, with analysis of the evidence they provide, is central to validating any claims about the nature of literary reading. This is to say, that the insights of the present approach, and those of others working theoretically and critically in the field of cognitive poetics, should be the focus of empirical investigations with readers as far as possible. Given that embodied cognition, including the studies in discourse processing that it has fostered, is an empirical science, it provides important methods for modeling reading that may be adapted to the literary context. Among the principles guiding such work is the proposal that for the purpose of studying the basic psychological processes of literary reading, the responses of ordinary readers are not whimsical or inadequate. The history of literary theory shows that this has almost never been accepted. For instance, to quote from *Theory of Literature* again, for Wellek and Warren “Every individual experience of a poem contains something idiosyncratic and purely individual”; and, against the ordinary reader, they allege “how distorted or shallow may be the reading of a less trained or untrained reader” (146). On the contrary, as many empirical studies show, given appropriate conditions the responses of ordinary (relatively untrained) readers during such studies are often surprisingly coherent and systematic (cf. Martindale & Dailey, 1995). What this
reflects, in particular, is the textual power of the literary text in directing or constraining readers regardless of their experience or point of view.

For example, in one study we performed with Coleridge’s “The Rime of the Ancient Mariner,” we analysed the frequency of citation of quotations from the poem in 124 book chapters and articles on the poem published during the period 1914-1991. The authors, as might be expected, represented a wide divergence in critical and theoretical approaches, from belles lettres early in this period to deconstructive at its end. At the same time we were conducting an empirical study with forty readers of the poem. Readers were asked to choose five passages that they found “striking and evocative” for commentary. Counting the frequency of readers’ chosen lines across 625 lines of the poem, we then compared this with the frequency of the lines chosen by critics. The correlation of the two was surprisingly high ($r(623) = .463, p < .001$). This finding suggests that the intrinsic power of the poem influences how readers are affected, whatever the theoretical commitments or personal preoccupations that the reader brings to the situation.

Empirical study in this respect has a valuable role to play in exploring and helping to verify what is systematic about readers’ responses. Usually, as in “The Mariner” example, this involves studying groups of readers so that, with appropriate measures, what is common in the responses is foregrounded while individual differences recede into the background. What is common must then be analysed in relation both to the textual features that prompt it and to the psychological capacities and processes that make such response possible. It is in such commonalities that we are likely to find some evidence for literariness: the textual features in question will most likely be not only those that are striking and evocative, but among those that most effectively prompt the intention variance phenomena that we have just analysed. For
example, in comparing the character’s intentions and the reader’s, we suggested the first intention variance effect, where intentions may alternate or conflict. We have often noticed that out of this alternation emerges a response in which the reader signals the assimilation of the character’s predicament to her own perspective. This is shown by the use of the pronoun “you,” as in the following example. I quote from one reader’s response to a story by Kathleen Mansfield in which a funeral procession calls at the wrong house and shocks the elderly woman who answers the door:

It just makes you realize that . . . your own mortality is something that can make you unable to think clearly. . . . While you think you still are alive and well and able to take care of yourself and help others, somebody else has decided that you can’t. (Kuiken, Miall, and Sikora, 1994, 183)

The adoption of the “you” perspective illustrates one significant way in which readers resolve (if that is the right term) differences between their own and the character’s intentions: by finally sharing intentions with the character, the reader arrives at new insights about her own character, her feelings and apprehensions. Moreover, this pathway towards the “you” perspective seems to signify that a certain kind of literariness has been evoked in the reader’s response.

If literariness is the result of an interactive process, a relation between text and reader, we should be able to distinguish it on cognitive grounds. This is in contrast to claims in the research literature that discourse processing theory can, without major change, handle the problem of literary reading. Thus, we should not expect that the tools that have been used effectively to analyse ordinary discourse can be applied as they stand to the literary field. In this paper I have suggested some of the features of the literary field that I propose arise out of special cognitive processes put into play by literary reading. The intention variance effects constitute an
important part of this process, and I have tried to show how these arise out of the new perspectives on reading opened up by studies in embodied cognition. A number of other features are certainly involved in addition to these (we have described other literary components elsewhere: e.g., Miall and Kuiken, 1999), but among these the most important appear to be these two:

First, we find a range of effects due to feeling which, apart from empathy, have so far received little attention either theoretically or empirically. These effects include the paradoxical properties of feeling (Miall, 2006, Ch. 6) such as anomalous suspense, pleasure in negative feelings, and the timeless or temporally marked vectors of feeling; feeling also contributes in other respects to the formal properties of literary reading, as in its anticipatory powers (Miall, 1995), or its contribution to defining episode structures in literary texts (Miall, 2006, Ch. 8). In these and other ways, feeling comprises an alternative set of principles that help shape and guide literary reading, probably in ways that are largely unique in this context. Much further research will be required to obtain a better understanding of these processes, including how feeling is situated in relation to the cognitive processes that are implicated in reading, and to the bodily processes that are also active – as I have, rather briefly, indicated in this presentation.

Second, it is clear that literary reading is often able to evoke our own concerns, primarily through feeling. The variance of intentions, for instance, reminds us of our concerns or reactivates them. Through this and other literary processes reading helps to identify and elaborate our specific existential predicaments, our “epistemic tensions,” in Stueber’s term (166), a process that often calls more frequently on our negative than our positive feelings. One principal outcome of literary reading is thus a process of self-modification, in which the intention variance effect and other components of literariness help us to rethink some aspect of our self
understanding. Much of this process, however, appears to take place below the level of explicit consciousness; we may be partly aware or entirely unconscious of its workings while we read, only emerging at the end of the text, perhaps, to pause and consider what the reading has summoned in us for reflection.

One of the more remarkable aspects of this process is its commencement in the unconscious, where, as I mentioned earlier, agency appears at first unattributed, feeling takes on prototypical form, and settings may capture our suppositions about animacy before we are in a position to consciously challenge them. The spectrum of early responses, such as this, that emerges in consciousness only later, has led some commentators to propose that human freewill is itself an illusion, that freewill claims to have motivated processes that are already underway (e.g., Libet, 1999; Wegner, 2002). In the present case, however, with the generation of literariness as an early phase of response that is unconscious for perhaps a third of a second, the features in question – agency, feeling, animacy – suggest rather the creation of the sense of disinterestedness that has been claimed for aesthetic response. In particular, the structural and formal features of the literary text, as we suggested with foregrounding, seem to conjure forces and energies within the reader that work themselves out independently of our personal interests. As I also suggested, however, an alternative phase in response puts into question the relation of the text to our own intentions, inviting us to compare our individual predicaments with those represented in the narrative before us – even to assimilate the character to our own personalities as some of our readers did through that ambivalent word “you.” Here, then, is perhaps the most significant intention variance effect, the alternation of disinterested and interested responses to the issues raised by the text. The alternation, to put it another way, of what is necessary and probable in the human realm (as Aristotle put it) with what is possible or real in my own domain.
The literariness of the text in this respect is compelling, not only because it helps us think about our concerns in a new way (after all, a work of philosophy or a self-help manual might do that), but because it systematically enables us to alternate between these two views, modifying or transforming my sense of myself in the light of the forces that animate the world depicted in the text.
References


