Emotions and the Structuring of Narrative Responses

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Abstract   Research that suggests the primacy of the emotions provides the context for a study of some of the processes sustained by the emotions during literary reading. In particular, the early processing of emotion in response to language, including narrative, is shown by several ERP (evoked-response potentials) studies that focus on the first 500 msecs of response. These studies suggest the possibility that emotion plays a key role in subsequent cognitive processing, including the making of inferences, invoking the reader's memory, or relating empathically to a character. Emotions evoked in these ways during literary reading embody a number of distinctive processes, and some of their implications are then examined here. These include self-reference (e.g., autobiographical memory), which may occur more often in response to literary than to other texts; anticipation (e.g., suspense, forming goals for characters), which also seems more frequent among literary readers; an inherent narrativity of emotions that prompts us to construe situations in narrative terms; a capacity of emotion to integrate experiences, whether through similarities across conventional boundaries or through a process in which one emotion modifies another; and a tendency to animism, the interpretation of objects and events through human emotions, especially in the early phases of response, prior to consciousness.

1. Psychology and Narrative

Psychological studies of readers' responses to narrative have so far paid little attention to the role of emotion and feeling, despite the extensive study of emotions that has been pursued by scholars in the fields of cognition and neuropsychology in the last decade or more. Hence, the special issue of this journal on Narrative and Emotions represents a timely

development, offering new perspectives on some significant and, in certain cases, long-standing problems in narrative theory. The intended contribution of the present article is exploring the narrative functions performed by the ordinary emotions of the reader.[1] My emphasis will fall on three particular aspects: (1) on the processes that shape narrative understanding initiated or sustained by the emotions, not on the emotional states that result from specific episodes or narrative endings; (2) on the reader's experience of emotions while reading, not on emotions as a pathway to elaborating new interpretations of literary texts; and (3) on what it may be about the experience of emotions while reading literary narrative that makes such response distinctively literary, not on the phenomena of emotion in narrative discourse in general. Let me now explain the assumptions embedded in some of these statements.

While interpretation is typically what literary scholars do, my approach is not concerned with them. My interest lies in how ordinary readers experiencing ordinary emotions construe literary narrative. Among readers who read for the pleasures and challenges that literary narratives afford, that is, "ordinary" or "common" readers, acts of interpretation as practiced in literature classrooms or scholarly writing are rarely to be found. While readers are interested, often intensely, in the significance of a literary text, this is because it engages them in reflecting on their own experience, or their sense of culture, or history. When such readers, moreover, empathize with the predicament of a protagonist, the everyday emotions and where they may lead hold the attention, enabling readers to immerse themselves in the text, and facilitating their recognition of the human significance of the experiences unfolding on the page. It is the properties and processes of such ordinary emotions that I examine here; in particular I look at how they are initiated, at their preconscious powers, at their relationship to the reader's sense of self, their integrative capacities, and several other issues.

The main emphasis, that which constitutes the new ground reviewed here, is the primacy of feeling or emotion as a process. This view, resting on recent research that has reversed the previous half-century's priorities in the emotion-cognition relationship, argues on neuropsychological evidence in particular that emotion is at the basis of, and shapes the purposes of, all cognitive activity (Ellis 2005: 17; Prinz 2004: 34–39). As Meir Sternberg (2003: 313, 382) pointed out several years ago, cognitivists made the mistake of setting "cognition against (at least above) emotion" under the

1. As Noël Carroll (1997: 191) has argued, we need to pay more attention to the garden-variety emotions of readers responding to fiction. He mentions emotions such as fear, awe, pity, admiration, anger, in contrast to the desire or castration anxiety that is the concern of psychoanalytic treatments of emotion.

influence of "the party line that would put the cognitive *before* the affective (in temporal, causal, analytic, and/or scalar order)." This shift in perspective requires us to specify what distinguishes emotion and what processes it brings to narrative reading. Where possible I point to empirical research on the responses of readers that helps support the account of emotion proposed. This is an agenda that will leave little space for other key issues, particularly those belonging to narratology (for a treatment of feeling touching on narrative perspective, however, see Miall and Kuiken 2001); nor will I attempt to define emotion or feeling (Damasio 2003: 28–30, 85–86), or consider whether emotions form a natural kind (Griffiths 1997).

2. The Primacy of Emotion

How might we understand the claim that feelings and emotions are primary when reading literary narrative? A preliminary indication of the validity of this claim is provided by an informal study I carried out recently in one of my classes, involving thirty-two students. I asked the students to read a short story by Kate Chopin, "The Story of an Hour," and choose two passages that they found striking; they then wrote a short commentary on their responses to the two passages. Analysis of the components of the responses (105 in all) showed that 16 percent referred to plot, 7 percent were self-referential, 6 percent were on stylistic aspects, and 5 percent on the historical context of the story. However, 45 percent of the comments referred to the students' own feelings while reading (e.g., amusement, conflict, confusion, curiosity, empathy, excitement, or irritation), while another 12 percent referred to the feelings of characters. Over half of the comments thus involved feeling, suggesting that feeling was a major component of readers' experiences of this story. But the status of such comments remains in question. Are they an outcome of a prior interpretive process? Do they in themselves embody (at least in some instances) such a process? Or do they initiate acts of interpretation? And what further role might they play in developing the reader's understanding? To consider this, I first look briefly at the interpretive context in which such feelings play a part.

   While we now know something of the cognitive processes of response to narrative, including findings from empirical work in the discourse processing paradigm (e.g., Bloome 2003), little of this work has addressed the issues at stake in literary as opposed to non-literary narrative. Indeed, some distinguished scholars have argued that the same processes operate in both realms. Walter Kintsch (1998: 205), for example, claimed that "The comprehension processes, the basic strategies, the role of knowledge and

experience, as well as the memory products generated, are the same for literary texts as for the simple narratives . . . used in our research. . . . The difference is in the 'what,' not the 'how.'" Yet how the comprehension processes are taken up or motivated may demonstrate important differences in the case of reading a literary narrative. In an important respect, the question is one of priorities, as I suggest below: given the rate at which a reader processes the verbal stream of a narrative, sentence by sentence, the limited processing capacities of the human mind suggest that not all the comprehension and inferential processes that have been demonstrated by empirical researchers can be activated in parallel. Moreover, which processes are implicated must be determined, at least in part, by the reader's sense of salience: what the reader at the moment may feel to be significant. The problem can be demonstrated by considering the range of inferential processes that have been proposed. In a recent paper (Miall 2008) I listed several of these, as follows.

   In discourse processing, Graesser and his colleagues (e.g., Graesser, Singer, and Trabasso 1994) suggest, on the basis of empirical studies, that six types of inference are generated online automatically, that is, within 650 milliseconds (msecs) of initial exposure to a narrative text. These include referential inferences (such as resolving anaphoric references), causal antecedents (enchaining the current proposition to what came before), a superordinate goal (i.e., the aims of a character), and a character's emotional reaction. What is not generated automatically, but may be realized subsequently, includes causal consequence, reader emotion, author intent, and several other classes of inference cited by Graesser et al. Another class of inferences, so-called intermediate inferences that explain the consciousness of a character, is outlined by Alan Palmer (2004: 177). In cognitive linguistics, metaphoric mappings are said to provide an inferential basis for interpreting narrative (e.g., Popova 2002). Deixis theory provides another source for inferences, establishing and tracking the spatiotemporal context of a narrative (Duchan et al. 1995). The role of different representations of time in structuring narrative understanding (such as the time of reading or the time of the plot) has been put forward by David Wood (1989). In foregrounding theory, as proposed in Miall and Kuiken (1994), a defamiliarizing experience is said to prompt inferential processes aimed at reconceptualizing a passage. A number of proposals have also been made about character understanding. For example, Emmott (2003) has argued for contextual frame theory, which proposes that readers keep track of the social space in which characters are embedded; several empirical studies have demonstrated that readers infer and keep online information about characters' emotions (e.g., De Vega, Leon, and Diaz 1996). Are all these

inferences generated in synchrony by the reader, in response to a single narrative passage? Are they generated online in the first few hundred milliseconds of the online processing of the passage? Does the mind of the reader provide the necessary processing capacity? What drives the inferential process, triggering the inferential processes called for by the readers' current understanding?

In determining what inferences may be significant and keeping response motivated, I suggest, emotional response plays a central role, possibly prior to the primarily cognitive inferences I have just listed. Not only empirical studies on narrative response, such as the informal one in my classroom, indicate the importance of emotion (Miall 1995), but so do several studies focused on the temporal unfolding of the first responses to verbal presentations.[2] While the findings from the three studies I will now describe are not entirely in accord, they indicate that significant emotional processing (as it is called) occurs early in verbal response, around 250 msecs after a word is first seen, or possibly earlier. Several factors influence processing in this context: not only whether the word has emotional connotations, but also whether it connotes positive or negative emotion, whether the word is high in frequency (i.e., familiar) or low in frequency, or how long emotional processing continues. In the studies I will mention regarding these questions, the main indicator of the temporal process of response is Evoked-Response Potentials (ERPs) generated by the electric activity of the brain and measured at a number of locations on the surface of the scalp. The waveforms that are produced fluctuate rapidly: their correlations at a given moment with a specific verbal feature, such as a negative emotion, are the measurements primarily reported in what follows.

A study by Kissler et al. (2007) presented participants with 180 nouns, classified as high arousal and unpleasant, high arousal and pleasant, or low arousal and neutral; they were shown in random order on screen. Early ERP responses, that is, those occurring shortly after word presentation, distinguished the pleasant and unpleasant words being read from the neutral words: the greatest effect for the pleasant and unpleasant emotion words occurred at around 250 msecs in the left occipito-temporal region (ibid.: 475). Thus the authors infer that "a word's emotional connotation is spontaneously activated immediately after assembly of its visual-word-form representation." That is, after the word's identification as a lexical form around 150 msecs, its "emotional significance amplifies early stages

2. Without reviewing the evidence for verbal response of the kind I consider here, Robinson (2005: 42) arrives at similar conclusions about the rapid appraisal of emotion. However, as I suggest below, the first responses are not necessarily "primitive," as proposed by Robinson (ibid.: 151), who follows the account of LeDoux (1996: 161).

of semantic analysis" occurring in the 200–300 msecs window (ibid.: 478). Following the ERP phase of the study, participants were given a surprise memory test, being asked to write down as many words as they could recall: the results showed that incidental memory (i.e., words recalled without a previous effort to memorize them) was better for emotion words, whether pleasant or unpleasant, than for neutral words (ibid.). Although this cannot be determined from ERP measures, the authors suggest that the emotion processing they demonstrate may extend to the amygdala, a structure deep in the midbrain thought to be responsible for processing emotion, and a way-station for initiating further significant functions, such as autobiographical memory. (I take up the issue further below.) This study suggests that processing of emotional aspects of language does not occur at a prelexical stage, but is a part of semantic processing. A different form of prelexical processing from the semantic, evoked by foregrounding effects at the phonetic level, may also be occurring early in the response sequence.[3]

In the next study I mention, ERPs within a longer time window were examined. Scott et al. (2009) presented a series of words that are high and low in frequency (as measured in the British National Corpus), and also positive (e.g., *gift*), negative (*evil*), or neutral (*bowl*) in emotional terms; these were randomly interspersed with an equal number of pseudowords (e.g., *blimble*). Participants were required to judge whether a word was a genuine word or a pseudoword, while ERP measures of brain activity were recorded. Examining ERP profiles obtained in response to the three types of genuine word, positive, negative, or neutral, Scott et al. found an initial effect at 80–120 msecs that indicated a distinctive response to emotion words, with low-frequency negative words showing the most marked response. This was followed by a response at 135–180 msecs, in which high-frequency negative words elicited a stronger signal than either positive or neutral words. In the 200–300 msecs window, negative and positive words showed stronger responses, especially high-frequency negative words. In the 300–450 msecs window, the main finding was that high-frequency words elicited a stronger response than those of low frequency, while by this point the "effects of emotion have become attenuated" (ibid.: 102). This evidence demonstrates that words connoting negative emotion will be recognized more quickly and will be processed for their potentially disruptive effects. Thus early verbal processing (within the first 450 msecs)

3. In an ERP study by Hoorn (1996) phonetic deviation (an expected rhyme failing to appear) produced distinctive responses at around 200, 400, and 700 msecs. Hoorn's study is suggestive, but it should be noted that it is based on anomaly (the missing rhyme) rather than on a meaningful phonetic deviation with literary significance.

will be influenced by several factors: frequency, arousal, and emotional valence. High-frequency negative words appear to be the most salient in early processing (around 150 msecs), while high frequency alone has a more robust effect in the 300–450 msecs phase.

The pattern of findings in this study points to the primacy of emotional response. The findings show, according to the authors, that "the emotionality of a word drives early lexical processes. Such evidence would indicate that a word's affective semantics is not a consequence of but, rather, a component of its lexical activation" (ibid.: 95). Thus the early response to emotionally tinged words, such as *gift* or *evil*, puts an emotional framework in place for subsequent processing. The gateway for this form of processing is also suggested by other studies, mentioned by the authors, that indicate early amygdala activity (around 200–300 msecs) in response to both positive and negative words (ibid.: 96).

In the third ERP study I will mention, Schacht (2009) compared responses during the first 500 msecs to words and to pictures of faces. Her verbal materials consisted of a set of positive, negative, and neutral verbs (e.g., *kiss*, *kill*, and *throw*), and a set of pseudowords; participants were required to judge whether each word was a genuine word. Schacht reports finding a very similar initial response to both words and pictures, in terms of scalp topography and ERP profile, except that response to faces occurred at around 150 msecs from stimulus onset, while response to words occurred later, at around 390 msecs, when the positive verbs elicited a stronger ERP response. This lateness in comparison with the findings of either Kissler or Scott (where emotion words were distinguished in less than 200 msecs) may have been due in part to the length of the words used by Schacht— most were of three syllables—and to the fact that nouns (used in the other studies), being acquired earlier in our language development, may be processed more readily than verbs (ibid.: 546–47). In Schacht's study, the response distinguishing valence (positive or negative) appears to follow rather than accompany lexical identification; it is followed in turn by the late positive complex, or P300 as it is called (at 300–450 msecs), usually considered to indicate active cognitive processing; Schacht reports that positive or negative words influence the size of the P300 wave maximally at around 500 msecs from word presentation (ibid.: 538).

These findings suggest that emotional connotations of words, particularly negative connotations, are detected early in the processing, and may occur in parallel to lexical processing or in close temporal proximity to it. Moreover, such responses unfold, perhaps to a quite complex level, prior to any conscious awareness of them. Consciousness gains access to the responses only some 350 msecs or later following word presentation

(Damasio 1999: 127). The first two studies (Kissler et al. 2007; Scott et al. 2009) thus indicate a pre-conscious response, distinguishing words with emotional connotations from neutral words in less than 200 msecs; in addition, the study of Scott et al. indicates that negative words of high frequency (in particular) are detected early, within the 135–180 msecs window, and that the distinctiveness of emotion words begins to fade in the following P300 phase (300–450 msecs). Schacht (2009), using verbs, found that valence in the case of positive words was detected later, at around 390 msecs, while both positive and negative words influenced ERPs measured at around 500 msecs.

The fading in the response to emotion words at 300–450 msecs reported by Scott et al. may be untypical: given the experimental setting, the emotion evoked by the words is of no longer-term significance to the reader. In a genuine reading situation, however, several processes may follow the detection of the emotional valence of a word. The studies I will now mention cannot report the time-course of the neural responses examined, given the measuring instrument used (positron emission tomography [PET], and functional magnetic resonance imaging [fMRI]), but the rapidity of response known from other studies of these brain regions makes quite plausible the basic contention I make in this paper for the role of emotion in initiating and directing cognitive processes while reading.

In two studies, the formation of autobiographical emotional memories is found to involve the amygdaloid complex, thus enriching the rapid decoding of emotional verbal materials. Fink et al. (1995), using regional cerebral blood flow (PET), studied the neural correlates of recalling emotional autobiographical memories. They were able to show that during such recall a number of right-hemisphere structures were activated in contrast to an impersonal memory condition and a resting condition; the areas in question included the right posterior cingulate cortex, right insula, right prefrontal, right hippocampus, and right amygdala. Cahill et al. (1996) asked participants to watch short videos, either emotionally arousing or neutral, while amygdala activation was measured. They found that memory for the videos three weeks later was highly correlated with amygdala response, but only in the case of the emotionally arousing videos. These studies demonstrate the role of the amygdala in the formation of long-term memories derived from emotionally arousing events.

The amygdala is usually associated with the occurrence of negative emotions, but a direct examination by Hamann and Mao (2002) of the response of the amygdala to verbal materials in an fMRI study (depth scanning of the brain) found activation of the left amygdala for both positive and negative words, but not for neutral; the effect extended into the

hippocampus, which has long been known to play a role in the formation of and access to long-term memory (Davidson et al. 2003: 13). Davidson et al. also observe, in a comment that bears on the challenge of literary reading, that the amygdala plays a critical role in "co-ordinating cortical arousal and vigilant attention for optimizing sensory and perceptual processing of stimuli associated with underdetermined contingencies, such as novel, 'surprising' or 'ambiguous' stimuli" (ibid.: 15). Another perspective, relevant to literary response, is that of Fletcher et al. (1995) on "theory of mind" (our ability to read the minds of others): while one group of participants read a story requiring attribution of mental states to characters (i.e., an empathic response), control groups either read a story requiring no attribution, or read unlinked sentences. For the attribution condition, PET measurements showed a clearly distinctive pattern of activation, including the left medial frontal gyrus and the posterior cingulate cortex (the same area activated during the recall of autobiographical memories).

   This sampling of additional studies provides several indications of the further processing of emotional response that may follow early detection of emotion in a word or phrase at around 200–300 msecs. It seems probable that, in a real-world context, connections are then made with the reader's long-term memories (perhaps eliciting paradigm scenarios, as de Sousa [1987: 42] puts it, which map the reader's understanding onto typical emotional situations), or, more specifically, autobiographical memories (as may have occurred in the Larsen and Seilman [1988] study to be mentioned shortly); or where relevant, the emotion elicits empathic recognition of the feelings of a character. A number of other possible extensions of the primary emotion, once evoked, can also be envisaged (and will be considered further below). The neuropsychological studies I have cited provide evidence in support of the proposal that, during response to a text, emotional response occurs early and is probably integral to the lexical processing of words and phrases. This may initiate subsequent emotion processes during the first 500 msecs of response that are capable of putting in place personal memories, or a feeling of empathy—processes that may stand alongside or preempt some of the inferential processes I outlined earlier (Graesser et al. 1994, Palmer 2003, etc.). In the following sections, I consider some of the implications that the role of emotion in directing cognitive activities has for the course of narrative understanding.

3. Self-Reference

A central property of feeling is self-reference: this is likely to be the basis for the immediate response to an emotional experience, given the rapidity of

the link to autobiographical memory shown in several of the ERP studies I reviewed. As Lazarus and Lazarus (1994: 140–51) put it, an emotion is an assessment of harm or benefit, protecting the self, helping to integrate response, but in particular appraising the personal meaning of the event, which may involve recognition of a previously experienced "emotional plot" or narrative. Thus we can postulate that the feelings experienced during literary reading are likely to evoke the reader's self at an early stage.

Self-reference was demonstrated by an empirical study of Larsen and Seilman (1988). They argued that literary reading goes beyond a purely schema- or knowledge-based approach since it is likely to evoke personal resonance in the reader—what Spiro (1982) referred to as "long-term evaluative understanding," that is, interpretation in relation to the feelings that help constitute the self. In particular, Larsen and Seilman (1988: 417) proposed, literature may maximize the role of "personal remindings," in which we draw on what they called the "empirical self": the individual's organized store of knowledge about the world and episodic or autobiographical memories (the people, events, places, etc., that we have encountered). It can be assumed that episodic memory, hence personal resonance, necessarily involves affective memories (Damasio 2003: 177–78). Larsen and Seilman asked their participants to read one of two texts, said to be either literary (a short story) or nonliterary (expository), each of about three thousand words. While reading, they were to make a marginal mark whenever the text reminded them of something. After reading they were asked to go back over their marks and to classify in each case the kind of reminding that had occurred according to several criteria. In the participant's memory, for example, had he or she been an actor, an observer, or the receiver (in talk or writing) of a reported event? This technique was termed the method of "self-probed retrospection."

Results showed that readers of the literary text generated twice as many actor-role remindings as readers of the expository text (a significant difference statistically), while observer and receiver remindings were a little more frequent for the expository text. The authors suggest that being an active participant in an event is a key to its relevance: literary reading "seems to connect particularly with knowledge that is personal in the sense that one is an agent, a responsible subject interacting with one's environment" (Seilman and Larsen 1989: 174). They also note that remindings were more frequent in the opening section of each text, and occurred more evidently in the literary text. This higher frequency may indicate the reader's need to mobilize specific personal information in order to create a context for the world of the text.

The authors of these studies did not collect detailed information on the

memories that were evoked. We do not know, for example, how often a reminding was of a particular event that occurred uniquely, or how often it was of a typical or characteristic event that occurred often—whether the feeling at issue, that is, was a token or a type. It seems likely that a type would provide a more flexible basis on which to build some literary understanding. Nor do we know how influential are the feelings invoked by remindings, whether they provide a context for establishing the significance of the text, or whether the text interacts with the feelings to modify the self of the reader in some respect: this distinction is between assimilation (aligning the text with our existing feelings and understanding) and accommodation (modifying our feelings and understanding in order to make sense of what is strange or unfamiliar in the text). In another version of this distinction, Oatley (2002: 43) contrasts transportation, the absorption of the reader in a text that takes one away from one's current circumstances (Gerrig 1993; Green 2004), and transformation, in which the self of the reader is changed in some way by the experience of reading.

The process of self-modifying is not well understood, although it is often mentioned. "The advantage of books," says the main character in Pérez-Reverte's *The Queen of the South* (2005: 259), "was that you could appropriate the lives, stories, and thoughts they contained, and you were never the same person when you closed them as when you had opened them for the first time."

Larsen and Seilman (1988) collected several other measures of their readers' remindings, such as the age of the memory, its concreteness, or emotionality, but no other significant differences were found between responses to the literary and expository texts. However, in looking at the points in the text that elicited remindings, they found it puzzling that descriptive passages elicited the most remindings, rather than scenes of action or dialogue. This finding suggests two, interrelated, aspects of literary response.

First, descriptive passages (compared with accounts of action or dialogue) may present a degree of uncertainty, challenging the reader to locate a meaning for them through the feelings they evoke. Descriptions of the environment, whether natural or man-made, often appear to connote a significance for the human actors (the forest was gloomy; the sunlight flooded the bedroom), one that is left implicit. Such uncertainty is more likely to evoke readers' feelings, which readily cross the boundary between animate and inanimate categories. Thus a frequent outcome of reading such passages is to attribute sentience (if only momentarily) to a house, a tree, or a precipice.

The second factor that may influence response to descriptive passages is foregrounding, that is, the employment by the writer of particular sty-

listic effects in the sound of language, its syntactic structure, or the use of semantic features such as metaphor. Foregrounded features will often be more appropriate to descriptive passages, where an author wishes to evoke feelings or conjure an atmosphere, than to passages of action or dialogue. In our own studies, we have found that remindings are elicited more frequently by descriptive passages with foregrounding. Since foregrounding is defamiliarizing and, as we have found, characteristically evokes higher ratings for uncertainty than do nonforegrounded passages (Miall and Kuiken 1994), it seems likely that indeterminacy or ambiguity in literary texts will be a particular focus for readers' feelings. It follows that it is in descriptive passages that we will most often detect the evocation of self-referential issues during reading. Oatley (2002: 43) has also pointed to the important role of ambiguity in inviting a reader's constructive reading, but he locates it in the array of features from which a reader constructs a character. Whether ambiguity occurs in a descriptive passage or a character description (or both) will, of course, depend on the particular literary text being read.

If textual indeterminacy, whether arising from description, character, or action, is a particular focus for the elicitation of a reader's feelings (and associated cognitions), it provides a more congenial framework for the enactive (cf. Ellis 2005: 1–20) rather than reactive understanding of emotion (the reactive view being widely held until recently: emotion was regarded as arising only when cognitive functioning broke down—what Mandler [1984: 43–48] describes as the conflict theory). Ellis, in putting forward an enactive view, argues that emotions actively promote the creation of an environment in which they can flourish or generate appropriate self-enhancing conditions. In this perspective, literary reading seems likely to provide a continuously renewed array of affordances: each point of ambiguity represents a nexus of affective possibilities, a set of conditions for a structured, and structuring, development of feelings in which one feeling may conflict with another or augment another, or one feeling may contextualize another. In his analysis of the visual arts, Ellis (2005: 168) observes, "We are presented with readymade imagery by the artist, but the imagery is emotionally ambiguous and has been especially contrived so that it lends itself to use by the viewer to open up the unfolding of the progression of a variety of possible emotions so that we can explore them, understand them, and be guided into deeper and deeper levels of their meanings." In other words, emotions are not merely responses to an irruptive event (the old reactive view). "Emotions are aspects of the organism's ongoing self-organizational activity, and these emotional processes drive the processing of information rather than being merely responses to it" (ibid.: 17).

Some experiences of reading will be innovative in their invitations to feel; others will invite replication of some previously felt emotion. As Cupchik et al. (1998) showed, different passages in a text may elicit what they termed either "fresh" emotions or "emotion memories." After reading each of four segments from a short story by James Joyce (totalling approximately seven hundred words), readers answered questions about emotions they experienced, and whether they were fresh or remembered. In general, fresh emotions were elicited more often than emotional memories, and were less pleasant; however, emotional memories were more powerful, suggesting that readers were more tentative in their judgments of fresh emotions. Over the four segments of the given story, emotion memories were more frequent early, whereas fresh emotions became more frequent later. This seems to imply an orientation role for emotion memories, and an interpretive role for fresh emotions.

In considering the "literariness" of literary texts, it seems probable that readers will experience more fresh emotions than in subliterary texts (such as romances or thrillers). In other words, and to simplify a complex situation, perhaps what sets literary apart from subliterary texts is the elicitation of novel rather than familiar feelings. Where subliterary texts call on basic, stereotypical, and expected emotions—a thriller evokes horror, for example, or a romance the myths of desire (cf. Radway 1991: 198)—a literary text evokes complexes of non-standard emotions that are likely to interweave and to modify one another. Emotion can be recalibrated, that is, evoked during conditions that are unfamiliar or unusual for that emotion. As Prinz (2004: 102) suggests, "New calibration files retune existing emotions to respond to properties that they were not genetically predisposed to detect." In this way, literary texts may play a significant role in retuning feelings, which forms a central component of the process of self-modifying reading, since recalibration shifts the implications for the future self that a given feeling projects.

4. Anticipation

As Frijda (2005: 490) puts it, emotion experience "creates future: The awareness of future that is constitutive of true intentions." Anticipatory aspects of literary reading have been shown in several previous empirical studies. Langer (1990), for example, although not focusing in particular on feeling, found that an anticipatory aspect distinguished literary from expository texts. Looking at think-aloud comments made by seventh- and eleventh-grade students in response to the two kinds of texts, she found the literary kind to be characterized by a series of forward-looking contexts

of understanding, whereas the expository was characterized by building cumulative relationships around a fixed point of reference. Using Iser's terminology, she comments: "During the reading of literature, the sense of the whole changed and developed as the envisionment unfolded—it existed as a constantly moving *horizon of possibilities*" (ibid.: 248). An earlier study with high school participants by Olson, Mack, and Duffy (1981) pointed to the same contrast. In a think-aloud study of responses to a short story and an essay, a high proportion of detailed predictive comments for the story were found, while few, and only general ones, were evoked by the essay.

The anticipatory role of feeling, on which such findings may depend, has been noted by several theorists not directly engaged with literary issues. For example, in reviewing the significance of feeling pain or pleasure, Bergson (1910: 34) remarks that the purpose of such feeling is probably "to call forth a resistance to the [subject's] automatic reaction which would have taken place"; it offers "the prefiguring of the future automatic movements in the midst of the sensation which is being experienced"—movements such as withdrawing the body or gesturing. Our feeling, in other words, includes a schema of imminent bodily movements. Frijda (2004: 161) argues that "Emotional experience is, to a large extent, experienced action tendency or experienced state of action readiness." Since the actions are still only potential, however, we can regard a feeling evoked during reading as implicating the body, even though the movement itself is immediately inhibited and will never be realized. Robinson (2005: 276) suggests that the reader's emotion includes the bodily changes characteristic of a given emotion, although she restricts her examples to such familiar experiences as the increased heart rate that accompanies fear (ibid.: 138). Bergson's account shows that a much fuller study of the bodily responses that correlate with reading will be required, including especially "those [responses] which are in preparation, those which are getting ready to be" (1910: 35)—bodily movements that, as readers, we experience in advance but, immersed in the virtual world of the fiction, cannot carry out.

Elsewhere, Bergson's comments also suggest how the anticipatory component of feeling participates in the judgments of our experience to which literary reading invites us. Feeling, he notes, is interposed between perception and action, it gives us time to judge: "I pass in review my different affections: it seems to me that each of them contains, after its kind, an invitation to act, with at the same time leave to wait and even to do nothing" (1911: 2). Again, while actual doing is not possible for the literary reader, feeling in this way alerts us to the implications of potential action—whether narrative implications or implications for our own interactions in the world. Feeling provides the signals by which potential courses of action

can be judged, and does so often well in advance of our ability to appraise a situation cognitively.

This is demonstrated in an empirical study reported by Damasio (1994: 216–17). Participants who were normal or had suffered damage to the prefrontal cortex, which disrupts the anticipatory properties of feeling, were invited to gamble with packs of cards. One set of packs involved much larger winnings but also a much larger risk of payouts to the banker. The normal participants quickly learned to avoid the risky packs by developing an antipathy toward them, while the brain-damaged participants never learned. What is particularly remarkable about the study is that the normal participants' pattern of behavior showed that they were learning to avoid the risky packs well in advance of becoming conscious of such behavior. A follow-up study by Carter and Pasqualini (2004) showed that the successful emergence of such a strategy of avoidance could be measured by the participant's skin-conductance response (a measure of a participant's degree of arousal or anxiety), thus confirming the bodily correlate of the anticipatory feeling (in this case, involvement of the autonomic system).

The types of anticipation mentioned so far range from the immediate (what are the implications of picking up a specific card?) to the long-term (e.g., implications for the self of being alienated). In the domain of literary reading, two anticipatory scenarios in particular stand out. First, there are the aesthetic correlates of keeping track of the developing shape of the text. In our moment by moment experience of it, what are the signals of the overall meaning of the text? Our feelings may provide an online, continually updated anticipation of the whole, although this may include complex or conflicting projections. Second, in the self-relational themes evoked by the feelings of the text we enact potential futures. For the reader, that is, we can say in Frijda's (2005: 490) words that the text "creates future": our feelings alert us to a possible self that we might become. As Frijda adds, "Emotion experience extends the environment that people and animals seek to adapt to, rather than that it only improves adaptation to the environment that exists" (ibid.). In reading, that is, we try out environments made available to us in the texts we read: although we may never encounter them in reality, feeling enlivens our experience of their implications for developing or modifying the self.

5. The Narrativity of Feeling

Some theorists of feeling have taken another approach to anticipation, which calls for separate consideration: they regard a feeling as an implicit narrative. For Lazarus and Lazarus (1994: 5), for example, "each emotion

has a distinct dramatic plot" that defines "what we believe is happening to us" and why it matters (see also ibid.: 149, 151); elsewhere, these authors also refer to Lazarus's account of the basic emotions as exemplifying "core relational themes, or dramatic plots" as though these were two aspects of the same phenomenon (ibid.: 196). Anger, for example, is described in the- matic terms as "A demeaning offense against me and mine" (Lazarus 1991: 122). Although this label offers no explicit temporal perspective, it points to a schema of narrative conflict: we can readily envisage how experien- tially, in a given instance, an emotion of anger will imply both the con- text from which it emerged and the resolution or other consequence it enables me to anticipate (and accept or reject, as Bergson suggests); one or both of these perspectives, the backward- or forward-looking, may remain below consciousness, of course, yet influence the direction and nature of the immediate response. In these ways the feeling situates me both in rela- tion to my past, as an individual with particular interests, concerns, rela- tionships, and possessions, and in relation to a potential future; and to the extent that I am aware of the emotion, I will sense that expressing or acting on the anger may irrevocably change my future from what it would other- wise be. It is often with a similar awareness, and even the sense of commit- ment to a character that may accompany empathy, that we experience the emotions that occur while reading a narrative, where the construction of the emotion is usually more explicit than we find in daily life.

The main claim I have considered in this section, however, is that emo- tions and feelings are intrinsically narrative. In Damasio's (1999) view, this is true of the responses of the very earliest, most primitive organism in its encounter with an object, since the organism's response represents not only the object but itself in the process of changing in response to the object (ibid.: 170), as though the response, a wordless equivalent to "I felt it," reg- isters a basic change from what the organism was before the encounter. This is what Damasio refers to as "telling stories," an ability of brains that long precedes language (ibid.: 189). Such an elementary encounter and change can be regarded as the core of narrative.

Hogan's (2003) account of narrative is based on a comparable insight. Arguing that emotions are micronarratives, he sees the prototypical stories of world culture developing on the basis of such narratives. In brief, Hogan claims that specific emotions "appear to be formed in part from emotion prototypes and from the narratives these prototypes define" (ibid.: 250). These prototypical emotions or micronarratives form the basis of the main genres of narrative, such as romantic tragicomedy. For example, the emo- tions of desire for affiliation and for sexual union produce one kind of romantic tragicomedy (ibid.: 259). In this way, he says, "our prototypical stories are, in their broad structure, expansions of the micronarratives that

define our emotion terms" (ibid.: 88–89). He provides detailed argument and evidence showing how heroic tragicomedy, romantic tragicomedy, and sacrificial tragicomedy have emerged panculturally, claiming that these "three genres cover perhaps two-thirds to three-quarters of canonical and popular narratives" (ibid.: 185).

Nussbaum (1988) offers an alternative insight, asserting that we do not have emotions directly or learn them directly: "They are taught, above all, through stories. Stories express their structure and teach us their dynamics. . . . Stories, in short, contain and teach forms of feeling, forms of life" (ibid.: 226). In this context, she suggests that each type of emotional knowledge, essential to living (such as the origins and prospects of anger), is available only through narrative (ibid.: 229). While the argument has value in alerting us to the cultural framework in which we come to understand our emotions, it can be argued that Nussbaum's approach makes a case for the intrinsically narrative nature of feeling. Rather than seeing either emotion or narrative as primary, this is to argue, as I did earlier in this section, that narrativity is an intrinsic feature of emotion. Thus we are led to construe the events that prompt emotion in us in narrative terms.

Additionally, as Ellis (2005) claims, we always and already experience situations in life with our emotions in process. A situation may then be read by us through the script of an existing emotion; or, to put it differently, the unfolding of the present narrative is shaped by its activation of a prior narrative latent in memory. Suppose that, driving amidst other traffic, we are cut off by another motorist. "Cognitively," says Ellis, "it may seem that the motorist who cut me off caused my anger; in reality, his behavior was only a convenient vehicle (no pun intended) through which to express an anger that was already present on an unconscious basis, an anger whose aims and objects have nothing to do with the motorist who cut me off" (ibid.: 35). As Ellis goes on to point out, "the same emotion can be realized in relation to a wide variety of alternative environmental conditions" (ibid.: 47)—and, we should add, alternative narratives. Just so the literary texts we read evoke emotion in us, enabling us to match fictional or poetic situations to episodes in our previous lives, although this most likely occurs unconsciously—we often do not know why we weep during reading, or feel pleasure at a particular moment. As I will discuss below, the literary text may in turn alter the emotion that we have bestowed on it.

6. Integrative Capacity of Feeling

Ellis's account points to another important capacity of feeling, one that is especially significant for literary reading, namely, that of the integrative capacity of feeling. Besides the basic capacity of feeling to integrate sources

of information in consciousness, mentioned by Frijda (2005: 483–84), there are three ways to consider integration, which we can summarize as evocations, boundary-crossings, and modification. Ellis's remarks above indicate the first: the positioning of emotions within personal history, where current events are assimilated to an existing agenda of self-related concerns embodied in a prior emotion. In one of his *Notebooks*, Coleridge (1957–2002, 1: 1599) provides an apt example: "Unspoken Grief is a misty medley, of which the real affliction only plays the first fiddle — blows the Horn, to a scattered mob of obscure feelings &c. Perhaps, at certain moments a single almost insignificant Sorrow may, by association, bring together all the little relics of pain & discomfort, bodily & mental, that we have endured even from Infancy. —" As Ellis would say, rather than attributing the integrative power of the feeling to association, Coleridge's experience can be understood as the evocation of an original feeling of grief already present, and now reactivated by the "single almost insignificant Sorrow."

In reading, we often find that a particular passage in the text acts as a reminder of a prior experience: examination of the circumstances then shows that the link is a feeling together with the self-relevant issues that it has evoked. In our empirical study of readers of Coleridge's "The Rime of the Ancient Mariner" (Kuiken, Miall, and Sikora 2004), one reader's comment (unpublished) provides a clear example. On the passage where the Mariner is in a state of suspension in the middle of the poem, he remarks: "this passage reminds me of the times when it seems everything in the world was against me, that I had nothing to look forward to." This shows the effectiveness of the passage in the poem in evoking a category of analogous, self-related examples.

The second type of integration, boundary-crossing, is a more radical version of the first type. We discuss an example in the same report. Another reader of the "Mariner" was struck by the description of the movement of the water snakes with their different colors; she found this both awe-inspiring and threatening, but went on to compare the moving colors to a quilt in motion, mentioning that her "mother is into quilting." In this example, we see "a loosening of the boundaries that normally separate conventional categories, highlighting in a novel way the movement and color of the initial image" (ibid.: 187–88). In this respect, then, the feeling combines apparently disparate experiences from the poem and from the reader's life, and so prompts the emergence of a particular theme that she characterizes elsewhere in her commentary as both enchantment and threat. In this role, feeling prompts the detection of similarities, analogies, or identities that interrelate the text being read and the reader's experience, allowing new insights to be developed.

The third integrative process, modification, points to the capacity of feeling to modify or reconfigure other significant feelings in a process that may serve to reconceptualize a recognized situation. A striking example is the modification that achieves catharsis in Greek tragedy: for example, the hubris that we recognize in Oedipus, relentlessly pursuing the truth, is modified and then eliminated in the closing scene of the play by the fear and then the pity that his fate evokes for those around him, as well as for us in the audience (see details in Miall and Kuiken 2002: 233–36). It seems likely that less dramatic examples of this process, involving other feelings, may often occur. Since, at any given stage in life, the self almost certainly pursues conflicting concerns, the feelings associated with these concerns will often also conflict: one feeling will reconfigure, modify, or cancel another. Possibly this process occurs continually, with little sense of its significance reaching conscious awareness. As the novelist Bernanos (2001: 26) puts it, "The simplest emotions are born and grow in impenetrable darkness, attracting and repelling each other like thunderclouds, in accordance with secret affinities." For the reader a literary text provides a framework for such conflicting processes of feeling, causing them to be felt consciously and, at times, their significance realized. Among the readers of the "Mariner," for example, we have found one who reconceptualized the death of his father through the reading of the poem; another confronted a long-standing fear of being powerless before criticism. In the modifying process, then, as we interpret it here, emotion during reading is not purged or eliminated (one common interpretation of Aristotle's catharsis); at the core of the process one feeling is recontextualized and thus modified by another. Literary texts are, in this way, effective vehicles for calling up feelings and modifying their significance.

7. Animism

Lastly, another important and often overlooked property of feeling is its capacity to promote what is usually termed anthropomorphism, that is, interpreting events or objects in the environment through human properties, such as feelings and intentions (cf. Mar et al. 2007; Boyd 2009: 137). The anthropomorphic impulse has, until very recently, played a dominant role in human cultural history: it has framed human relations to the environment (as the myths of many countries bear witness) that endow the sky, mountains, forests, or the sea with divine or demonic presences. Such an impulse continues to play an important role in response to the poetic sublime (Miall 2007), but I am not concerned with that here. Rather, I refer to a more immediate, practical manifestation, one obvious example of which

is our tendency to perceive agency in, say, a distant bush, by a capacity that we are able to exercise extremely rapidly and without thought. While this capacity renders us liable to the "false positives" involved in reading the signs of an enemy, as Fodor (1983: 71) points out, it is evidently better in evolutionary terms to be often wrong than to be conservative and fall prey to an unsuspected attacker. To endow a bush with intentions is an example of a capacity that our feelings exercise frequently in less urgent circumstances—such as reading poetry.

The tendency to read human feelings into the landscape in poetry was, in fact, so common in the nineteenth century that the art critic John Ruskin (1897, 3: 161–77) designated it as the "pathetic fallacy." One example he cites, from a poem by Kingsley, is "The cruel, crawling foam" (ibid.: 164). Yet he later provides several examples of his own of agency in landscape. Writing of the aesthetic features of various types of landscape, he suggests how trees are seen at their best: "For the resource of trees are not developed until they have difficulty to contend with; neither their tenderness of brotherly love and harmony, till they are forced to choose their ways of various life where there is contracted room for them, talking to each other with their restrained branches" (ibid., 4: 370). Erasmus Darwin, in his volume *The Loves of the Plants* (1791), attributed to plants love, sexual desire, and other feelings related to their generative relationships. Another approach is the capacity that Keats termed Negative Capability, when directed to nonhuman entities. As he writes in one of his letters: "if a Sparrow come before my Window I take part in its existence [*sic*] and pick about the Gravel" (1958, 1: 186). In a different vein, Oatley (1994: 56) points out our tendency to enliven the physical forces in buildings: "Looking at the columns of a Greek temple we might feel the stresses that would be involved if we were holding up the roof, and project these onto the building."

In these and many other ways, we feel how we sense the forces that sustain or animate the non-human world, whether this occurs by a resonance between the object and our feelings, or by our projecting of feelings onto the object. This distinction is not insignificant: Keats, we might assume, is not imposing human intention or feelings on the sparrow picking about the gravel, but using his own feelings for movement and intention to realize what it means to be the sparrow at that moment. Ruskin or Darwin, on the other hand, are interpreting the powers of trees or plants by conferring on them humanlike intentions and feelings. The former process we might term anthropic (understanding through human qualities) rather than anthropomorphic (endowing with human qualities). To turn to Coleridge again, the language of a text may be explicit in appealing to human powers, as in the metaphoric first line of "Frost at Midnight": "The

frost performs its secret ministry." Here the human agency of "ministry" is attributed to the frost. In other cases, the appeal to agency is implicit, as it is in a phrase from "The Nightingale" that readers encountered in one of our empirical studies: "this old mossy bridge." Here, for one reader we studied, the line evokes the feeling of being "isolated and alone and alienated" (other readers, of course, might read the words through other feelings). In such examples, the imagery of the phrases ("old," "mossy") presents an expressive, physiognomic profile (Werner and Kaplan 1963) for which a reader, however fleetingly, supplies a feeling that has kinesthetic and other bodily properties partly specific to that reader.

So far we understand little of such processes during reading, yet they are likely to make a substantial contribution to the overall feeling tone experienced by the reader, and participate in the integrative responses I outlined above. (An example would be a reading in which a feeling of alienation is modified and overcome by the sense of companionship that Coleridge goes on to convey.) In comparison with the reading of a non-literary text, moreover, the literary reader is likely to consider every sentence as potentially significant, whether occurring in passages of description, action, or dialogue; each contributes to developing the feeling structure of the text and thus represents some current of meaning. As we have shown empirically, the power of literary phrases containing foregrounding is particularly likely to evoke feeling (Miall and Kuiken 1994), but the degree to which this is anthropic and under what conditions has yet to be studied systematically.

The question of anthropism is a complex one, and raises questions about our capacities for relating to and understanding the non-human environment, including whether there are dimensions of our feelings that are continuous with the world of sentience (such as Keats's sparrow). Steiner (2004: 11), for example, has argued that tragedy denies the anthropic principle, as I have called it: tragedy "is a performative statement of man's unhousedness in the world (*apolis*), of an elemental, non-negotiable enmity between being and existence," that is, between an intelligible human life compared with mere survival. Even here, though, Steiner's language incorporates an anthropic term, *enmity*, suggesting that even as the environment conspires to destroy us, we still, inescapably, persist in reading the world in terms of our personal narratives.

8. Conclusion

I have presented what appear to be several core properties of feeling and considered their implications for reading literary narratives. After con-

sidering the primacy of emotion during verbal processing in the light of several neuropsychological studies, I reviewed what is apparently a central property of feeling, its self-referential function. As shown by Larsen and Seilman (1988), reading literary texts appears to invoke self-referential memories focused on the active self more frequently than do non-literary texts, a finding that indicates a central role for feeling. That self-referential memories occurred more frequently in descriptive passages seems to indicate that such passages, being more ambiguous, call for feelings in order to establish their significance. Ellis (2005) similarly points to the role of ambiguous imagery in the visual arts: this invites the enactive, self-organizing activity of the emotions that enhances self-understanding. The prevalence of fresh over familiar emotions later in reading a text, demonstrated by Cupchik et al. (1998), indicates their interpretive significance. Thus the occurrence of fresh emotions may be more characteristic of literary texts, particularly what Prinz (2004: 102) refers to as "recalibration" of non-basic emotions.

Another key role for feeling lies in its anticipatory properties. Anticipation was shown in several empirical studies to characterize the reading of literary in contrast to expository texts. As Bergson (1910) and others suggest, the anticipatory component of feeling appears to include preparation for bodily movements, although during reading these cannot be carried out; yet in this way feeling may invite us to consider the implications of the projected action. Damasio (1994) and others demonstrate the power of feeling to prompt judgments before conscious awareness has had time to assess the situation. In addition, anticipation during reading bears on our emerging aesthetic sense for a text, as well as on evoking self-referential feelings that enable us to assess potential futures. Emotions have also been identified as narrative in form: an emotion situates us in relation to both our past and a possible future. Hogan (2003) argues that from such micronarratives develop the major narratives of world literature.

I have discussed the integrative powers of feeling, examining three such capacities: evocations, which link a current feeling to previous occasions of it; boundary crossings, in which emergent meanings arise from feelings that link two or more different domains; and modification, where one feeling may modify or reconfigure another. Finally, I considered the anthropic significance of the feelings attributed to events and objects in the world, that is, our tendency to interpret the environment through its sensed resonance with human feelings and capacities.

This essay, then, has suggested the relevance for reading literary narrative of several key components of feeling: self-reference, anticipation, narrativity, integrative functions, and anthropism. As the informal study

of students' responses to a short story indicates, the ordinary reader characteristically reads for the feelings that literary narrative evokes; such feelings may then play a critical role in developing the reader's sense of significance, including the personal meanings of the narrative, as well as its structural and aesthetic properties. In this context, the analysis of narrative in the light of cognitive aspects such as perspective, story and plot, temporal markers, deixis, situation models, and the like, remains essential; but the early onset of feeling in the reading process and its role in organizing the reader's subsequent response points to our need to elaborate some new principles to guide our understanding of narrative response. This calls for a radically more sophisticated view of the processes inherent in feeling and how they may direct the various cognitive processes to which narratologists have appealed. Such an approach will require the contributions not only of narrative theory and the psychology of cognition and emotion but a commitment to empirical study with actual readers to help verify where possible the new hypotheses about reading that will be developed.

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