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The psychology of fiction:

Present and future

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Abstract

Fiction has become a topic of interdisciplinary interest for literary scholars, psychologists, and cognitive scientists. With a conception of fiction as a set of simulations of selves in the social world, new possibilities have emerged. We review work on empirical testing of literary theory, on the use of literary works in psychological investigations of emotion and imagination, on the contribution of cognitive processes such as priming and theory of mind to literary effects, on cross-cultural comparisons, and on effects of fiction that include possible improvement of social abilities and changes in selfhood, including the educational and therapeutic potential of such effects. Current research of these kinds offers a set of stepping off points for the future.

Introduction

The formation of separate university departments of literature and psychology in the nineteenth century seems to have contributed to an antagonism in which many literary scholars regard psychology as reductive and trivializing, whereas many psychologists regard fictional literature as description that lacks reliability and validity. These positions ensure that although literary scholars and psychologists might be interested in similar topics such as character and emotion, they tend to take no notice of each other.

The founding discussion of fiction in the West was Aristotle's *Poetics*, (330BCE/1970), which combines literary theory and psychology. With the antagonism between literary studies and psychology, integration might have died. But integrative thinking has continued, although in a rather back-room way. For instance in literary studies it can be seen in a work that people in departments of literature hold in high regard, Erich Auerbach's (1953) *Mimesis*. About researches of the kind he presents in that book, Auerbach (1958) has said: "For when we do understand the past what we understand is the human personality, and it is through the human personality that we understand everything else. And to understand a human existence is to rediscover it in our own potential experience" (1958, p. 102).

Integrative thinking can be seen, too, in psychology, for instance in a book by Jerome Bruner (1986) who wrote: "There are two modes of cognitive functioning, two modes of thought, each providing distinctive ways of ordering experience, of constructing reality ... A good story and a well-formed argument are different natural kinds ... The one verifies by eventual appeal to procedures for establishing formal and empirical truth. The other establishes not truth but verisimilitude" (p. 11). Bruner calls these modes, respectively, "paradigmatic" and "narrative."

His argument might be thought to justify the separation of university departments that treat the different modes. But for both literary theorists and psychologists, the real implication is the opposite, because it includes an

invitation to investigate how narrative thinking works. In carrying out this investigation, dialogue between the humanities and cognitive science is essential. The cognitive approach to literature, which this volume—with its contributors from both literature and psychology—so admirably presents, is one of the products.

Our argument in this chapter is that, with the growing integration between the humanities and cognitive approaches, this is a propitious time for the psychology of fiction. Members of departments of language and literature, feeling perhaps a vacuum after the wars between traditionalists and post-modernists, now take an interest in psychological issues. At the same time cognition has become important in psychology, with its applications to problems that include those of understanding what goes on in the minds of people as they engage with fiction.

Shifting the premises

With the coming of cognitive science and its interdisciplinary structure that includes psychology, linguistics, and artificial intelligence, older attitudes have shifted. Cognition is about knowledge (conscious and unconscious, concerning the physical and social world), how it is organized in the mind and how it is used in such activities as perceiving, remembering, thinking, reading, and imagining. Literature, too, is on this agenda, and the approach is described by Jaén-Portillo and Simon (this volume).

We (the authors of this article) propose that this movement can be pressed further. Strictures by post-modernists such as Derrida (1976) who proposed that text cannot represent anything outside itself, and by psychologists who argue that fiction is flawed description, are jejune: both derive from the assumption that art is imitation or copying, the usual translations of *mimesis*, the central term in Aristotle's *Poetics*. This family of meanings is, however, the lesser part of what Aristotle wrote about. As Halliwell (2002) has shown, the Greek word, *mimesis* had a second family of meanings, which is often ignored. This family has to do with model-building, and with imagination. As Halliwell puts it:

Reduced to a schematic but nonetheless instructive dichotomy, these varieties of mimetic theory and attitude can be described as encapsulating a difference between a “world-reflecting” [conception] (for which the mirror has been a common though far from straightforward metaphorical emblem), and, on the other side, a “world simulating” or “world creating” conception of artistic representation. (p. 22.)

This second family of meanings is more important for fiction. Literary art is not, therefore, to be judged entirely by criteria of a correspondence theory of truth, but principally by coherence (one of Aristotle’s themes in *Poetics*).

The metaphor that Shakespeare (e.g. *A midsummer night’s dream*) and Coleridge (1794-1820/2000) used for the world simulating or world creating aspect of fiction was dream. As we take up a novel, or go to the theater or cinema, we mentally enact a version of the dream into which the author conducts us. Alice-like, we pass through the looking glass into a created fictional world. Dream is a good metaphor because it summons a state of mind that is both familiar and different from the ordinary one. At the same time, the question of the properties of this state is sharpened. The modern metaphor is simulation. Pieces of fiction are simulations of selves in the social world. Fiction is the earliest kind of simulation, one that runs not on computers but on minds (Oatley 1992; 1999). One of the virtues of taking up this idea from cognitive science is that we can think that, just as if we were to learn to pilot an airplane we could benefit from spending time in a flight simulator, so if we were to seek to understand better our selves and others in the social world, we could benefit from spending time with the simulations of fiction in which we can enter many kinds of social worlds, and be affected by the characters we meet there.

With this shift, an interdisciplinary dialogue can take place without literary scholars having to sacrifice anything to trivialization or reductionism, and without psychologists and cognitive scientists having to sacrifice anything to inadequate methodology.

Testing literary theory

Although the theory of fiction as simulation emphasizes coherence (Oatley 1999), questions of correspondence remain. In particular, empirical tests of statements made in literary theory are important. An early example was the experiment by I. A. Richards's (1929) in which he gave 13 poems to a set of students of English literature, and asked what they made of each one. The assumption was that educated people understand what they read but, wrote Richards, "readers of poetry frequently and repeatedly *fail to understand it*" (p. 12, italics in original). Richards did ask what people were doing when they read a poem, but his intent was to demonstrate their shortcomings. The movement of New Criticism, which derived from the approach, was to teach people to make correct interpretations (e.g., Brooks and Warren 1938). It was Rosenblatt (1938), from a different tradition, who started to ask seriously how readers respond to literature, and with her book the movement of Reader Response Criticism began.

An early empirical study of an important literary concept, in the mode of taking an empirical interest in the experience of readers, was by Van Peer (1986) who tested whether defamiliarization—the set of literary techniques designed bring an idea or observation alive, as proposed by the Russian Formalists—did indeed have effects on the reader of the kind that were claimed. Van Peer uses the term “foregrounding” for this set of techniques, and argued that it is accomplished by creating linguistic variations that are departures from ordinary usage. He asked his participants to read six short poems, the linguistic content of which he had analyzed to determine which phrases were foregrounded. He found that foregrounded phrases were indeed experienced by readers as more striking, more important, and more worthy of discussion, than other phrases.

A different kind of empirical test was conducted by Gerrig and his colleagues (Gerrig 1993, Prentice, Gerrig & Bailis 1997, see also Gerrig, this volume). These researchers tested Coleridge's (1817/1907) idea that in fiction there is a “willing suspension of disbelief.” The phrase is so resonant that it seems true. Yet, psychologically, Gerrig and his colleagues found it to be misleading. When we

read fiction, we don't have to suspend disbelief. Instead we tend often to accept what is said rather easily, and sometimes it may not be true (see also Green and Brock 2000; Marsh and Fazio 2006; Marsh et al. 2003).

Tests have also been made to study tenets of the Romantic theory of literature as proposed by Collingwood (1938). Oatley (2003) has cast these tenets into psychological hypotheses. They include the hypothesis that art is an expression of problematic emotions in languages such as those of words, music, and painting, in order to explore and understand them. Djikic and Oatley (2006) used Pennebaker et al.'s (2001) Linguistic Inquiry and Word Count (LIWC) to analyze the transcripts of interviews of nine writers of fiction and nine physicists. They found that as compared with those of the physicists, the writers' preoccupations were far more concerned with emotions, especially negative emotions.

Studies of these kinds point towards a future in which rather than accepting assertions from literary theory that seem plausible, these assertions can be investigated so that we know better what readers actually make of poems and stories, and what writers are doing when they write them.

Literary works in psychology

Just as psychology has been applied to testing theories of literary fiction, an equally important movement is taking place in the opposite direction. Literary fiction is starting to provide material for the development of psychological understanding.

An important example of this movement derives from the work of Turner (1996) who has proposed that: "Narrative imagining—story—is the fundamental instrument of thought" (p. 4). Its function is to give the world meaning. There are two steps. The first is to form a story, a sequence about what someone did and what events occurred. The second is to project this story onto another story, for instance, onto the story we have constructed of our own lives. He calls this process *parable*: the projection of story-structure onto the encounters of everyday life, in order to give them meaning. Thus narrative thinking is the stuff of

everyday mental life. Turner moves his argument forward using stories from literary sources such as *The thousand-and-one nights*, and the *Odyssey*.

A second way of using literature has been to propose that since works of fiction tend to induce emotions in their readers or viewers, they can be used in psychological experiments. A method of choice has been to use clips from films (Gross & Levenson, 1995). It is also worthwhile to consider using whole works. Thus Oatley (2009) has proposed that we can see Shakespeare's *Othello* as a study of resentment in the play's main protagonist, Iago. It is hard to empathize with Iago, and this points to an interesting psychological issue. Why should this be, when most of us have experienced destructive resentments? The psychological point is that since works of literary art enable people to experience emotions, we can use this experience to study the psychology of emotions that arise in reading literature or watching drama, just as in the process of understanding visual perception, researchers use demonstrations, such as those of induced movement and stereopsis.

Fiction is imagination and, as Mar and Oatley (2008) have argued, it is a kind of abstraction. Abstraction is necessary to think about anything beyond the immediate and concrete. Suggestive evidence is that a group of people, the Pirahã, who live in Amazonia, have no indigenous fiction and live in a here-and-now world without abstractions (Everett, 2005).

"The human imagination remains one of the last uncharted terrains of the mind." So says the jacket of Byrne's (2005) book on how people use their imagination to think about "what if." The best book on the development of imagination we know is that of Harris (2000). Fiction—sometimes known as imaginative literature—is an under-explored means for the study of imagination, although this approach has been used by Gibbs and Matlock (2008). There are plenty of books from literary theorists with "imagination" in their titles. In the future we may hope to see more use of fiction to explore psychological accomplishments of imagination.

Psychological processes in literature

An important but only rather recently implemented movement has been to ask what psychological processes are involved in reading fiction. In studying comprehension, some researchers (e.g., Graesser, Olde, and Kletke 2002) pay careful attention to stories and story structure in their work on discourse analysis.

Some psychological processes are drawn upon widely in fiction. Metaphor and metonym are fundamental, as described by Jakobson (1956) and Lodge (1977). Whereas metaphor is a mapping of one domain of meaning onto another, metonymy works by juxtaposition, spreading meaning by implication, for instance from what someone in a novel or film wears, or what they eat, or the manner in which they move, to how we might understand that character. Hogan (2002) has proposed that priming—a basic cognitive process in which one event or perception makes more available a certain interpretation of another event—offers a cognitive explanation of how tropes such as metaphor and metonym work. Further examples of Hogan's work, drawing on basic cognitive processes to understand literary effects, can be seen in his chapter in this volume.

Zunshine (2006) has argued that reading fiction is the pleasurable exercise of our faculties of theory-of-mind. She, too, has a chapter in this volume. Theory of mind is a lively topic in psychology in which it has been found that, from about the age of four, children start to be able to infer something of what others are thinking and feeling. Zunshine argues that fiction allows us to apply these skills on fictional characters, often in complex ways, and that writers construct this process to be enjoyable. Some genres such as detective stories indeed require us to work out what is going on in the minds of characters who are trying to conceal what they are thinking and feeling.

A recent innovation in cognitive approaches to literature has been to employ neuroimaging (Mar, 2004). This work has provided encouraging evidence for the idea of simulation, rooted within theories of embodied cognition (Barsalou et al. 2003). The embodied cognition approach argues that conceptual knowledge is

partially represented in modality-specific regions of the brain, such as motor areas and sensory areas. In line with this idea, action verbs referring to emotional expressions result in activation of the facial musculature which in turns can shape emotional judgments (Feroni and Semin 2008). Action words specifically affect areas of the motor cortex associated with the body part used to perform each action (Pulvermüller et al. 2001). Work in this area has just started to extend to full-length narratives. Speer and colleagues (in press), for example, found that different brain areas appear to track different aspects of a short story the participants are reading, and these regions correspond with regions activated when the person performs or observes similar activities. Other neuroimaging studies have begun to uncover differences between narrative comprehension and sentence-level comprehension (Xu et al. 2005), and how the brain builds models of a story (Yarkoni et al. 2008). This is an exciting new area of research that is likely to be important for future of cognitive approaches to literature.

Exploration across cultures

A conspicuous accomplishment of international journalism of the twentieth century on war, health, and other human vicissitudes, has enabled us to empathize with people in societies and predicaments far distant from our own. Fiction has a similar accomplishment. It is a welcome legacy of post-colonialism that prose and film fiction from all round the world has come to be of great interest.

In fiction, explorations extend into the contemporary world and into the past. In the contemporary world, we might think of the novel *Waiting* (1999) by Ha Jin, a Chinese writer who emigrated to America and writes in English. The novel is about the difficulties of love relationships in Chinese Communist society. If we treat history not as time travel but as culture travel, we can think of Mary Renault's novels, e.g. *The Last of the Wine* (1956), which brings to life Athens at the end of its Golden Age and allows us to leap two and a half millennia into the troubles and joys of everyday Athenians. This mental travel, in space or time, strips off what is eccentric and trivial, and engages us in concerns that are

intrinsically human so they become indistinguishable from our own.

A particularly important contribution to cross-cultural understandings has been Hogan's (2003) book for which he read stories from all round the world, from before the time of European expansion. He found three kinds of story to be so common as to be universal. The most common is the love story. In its paradigmatic form, lovers long to be united but they are impeded, most typically by a male relative of one of them. In the tragic version the lovers die, perhaps to be united on another plane. In the comic version they are united and the relative who was impeding them is reconciled. Second most common is the story of conflict. In a typical version this is between brothers, one of whom takes what rightfully belongs to the other, for instance, by displacing him from a throne or a property. There is a fight, in the course of which right is restored, though sometimes with the realization that this has involved the person who has thought himself justified being drawn into evil actions. The third kind of prototypical story is of self-sacrifice, in which a community in severe difficulties is saved by an individual making a sacrifice of his or her life.

In the future, reading literatures of different cultures will enable Western-centric conceptions to be recognized and modified. It will allow the unchallenged assumptions about Western mind, omnipresent to the point of invisibility, to be brought to the foreground and examined as only one among many.

Effects of literature

Although, in both Western and Eastern traditions, it has been accepted that reading or watching fiction has psychological and social benefits, it is only recently that this issue has been tested empirically. In children, use of terms for mental states (desires, emotions, etc.) as well as success in theory of mind tasks, was studied by Adrian et al. (2005). Children's use of terms for mental states and their abilities at theory-of-mind were found to be related both to the amount of reading mothers did with them, and to the number of mental-state terms that mothers used when they read picture-books to their children. Related research by Peskin and Astington (2004) showed that the key was for children to imagine

such mental states.

For adults, Stanovich and his colleagues (e.g., Stanovich, West, & Harrison, 1995) have shown that reading promotes cognitive gains generally. But are there psychological effects specific to fiction? Hakemulder (2000, 2001, 2008) conducted experiments to see whether student readers mentally took on roles of characters in stories, and whether doing so would enable them to be more empathetic. Participants read either a nonfiction essay about the problem of women's rights in Algeria, or a chapter from a novel about the life of an Algerian woman. As compared with those who read the essay, those who read the fiction reported that they would be less likely to accept current norms for relationships between men and women in Algeria. In a further study Hakemulder found that, as compared with readers asked to attend to the structure of a story, readers who were asked to project themselves mentally into the situation of the story showed decreased tolerance for current norms among students.

In our own studies we have found two kinds of effect (Mar, Djikic, and Oatley 2008). In one kind we investigated associations between reading fiction and social abilities. Mar et al. (2006) measured the amount of reading of nonfiction and fiction that participants did, and then gave them two tests of social ability. One was a test of theory of mind and empathy, and the other was a test of interpersonal perception in which participants watched video clips of ordinary people in interaction and answered questions about what was going on. Mar et al. found that fiction reading was associated with better performance on these tasks whereas nonfiction reading was associated with worse performance. The former association was re-tested in a larger sample, with the same result, and with an additional finding that the effect was not due to individual differences (Mar et al. in press). In another follow-up, Mar (2007) used a fiction story and a nonfiction piece from the *New Yorker*, and randomly assigned people to read one or the other. Immediately after reading, those who read the piece of fiction did better on a test of social reasoning, though not on a test of analytical reading, than those who read the piece of nonfiction. It was hypothesized that reading fiction put participants into a state of preparedness to reason about the social

world.

In a second kind of study we investigated effects of fiction on selfhood. Djikic et al. (2009a) randomly assigned people to read either Chekhov's short story, "The lady with the little dog," or a comparison piece in a nonfiction format of the same length and reading difficulty, with the same characters, the same events, and some of the same conversation. Chekhov's story is about a man and a woman at the seaside resort of Yalta who have an affair although they are both married to someone else. The comparison piece was written by one of us (MD) in the nonfiction style of proceedings of a divorce court. Readers found it just as interesting as Chekhov's story, though not as artistic. Before and after reading, we measured readers' emotions, and also their personality using a standard measure of the Big Five personality traits. We found that as compared with those who read the court report, those who read Chekhov's story changed their personality in small but measurable ways, and in idiosyncratic directions. These changes were mediated by the changes in emotion that readers experienced in the course of reading. Furthermore, we found that even defensive individuals, whose avoidant style of attachment involved habitual suppression of emotion in everyday life, experienced significantly more emotion reading Chekhov's story than the control text (Djikic et al. 2009b). This leads us to believe that literature could provide a non-intrusive, non-threatening, method of reaching and affecting some people who are usually hard to reach.

When we engage our self in a piece of fiction, we enter a simulation that has the potential to transform that self. How might this work? The reader of Chekhov's "The lady with the little dog," inserts the intentions and plans of the story's protagonists, Gomov and Anna, into his or her own mental planning processor, and thereby becomes affected by the circumstances that affect Gomov or Anna. Chekhov offers cues to start up and keep the simulation running. We experience something of how the two protagonists affect each other and are affected by each other in the intimacy that they realize, and in their inwardness. We readers take on the goals and plans of Gomov, and of Anna, but we also remain ourselves. It is we ourselves who experience emotions. These emotions are not those of the

characters—these characters are abstractions. The emotions are our own in the frustrations and calm moments and reunions of the story. For each of us the experience is different. We might ourselves be in a relationship that is deadening and wonder how we reached this impasse. We might feel excited or disapproving of the protagonists' affair. We might feel a foreboding, so that we wonder how anything good could come from it, and of the effects it will have on others. As readers with these or other thoughts and feelings, our own emotional experience and our habitual selves can change somewhat.

In the future we envisage more studies of how people's conceptions of others and themselves change in engagement with fiction. We are in the process of testing other stories, and comparing their effects with those of nonfictional essays. We hope, also to investigate what kinds of stories have particular kinds of psychological effects. Most importantly we envisage being able to use the studies of effects to see how fiction really works.

Education and therapy

Now that measurable psychological effects of reading fiction have begun to be shown, there are implications for education and therapy. In education it has been assumed that fiction is worthwhile, and teachers of literature, from primary school to graduate school, use literature in discussions both of understanding others and of understanding oneself. We may perhaps look forward to thinking of how evidence that fiction can promote certain kinds of personal and interpersonal improvements might affect education.

In the area that may broadly be called bibliotherapy, worthwhile programs have emerged. One such is *Changing Lives Through Literature*, which began in 1991 in discussions between a professor of English literature, Robert Waxler, and a judge, Robert Kane. They agreed that perhaps offenders could be sentenced to probation rather than jail on condition that they attended a seminar on literature. A book has been published on the project: Trounstine and Waxler (2005). An evaluation of the program by Jarjoura and Krumholz (1998) was of 72 young, male, repeat offenders on probation. There were two groups. In a Program

Group, 32 of these men took the Changing Lives Through Literature program (in four eight-person classes, which included the literature seminars, talks from role models, and other rehabilitative input). In a Comparison Group 40 of these men with comparable criminal records did not take the program. During the study period six of the men in the Program Group (18.75%) committed further offences while 18 in the Comparison Group (45%) did so. Although this result is encouraging, the report contains no statistical analyses, and there is ambiguity about the active ingredients of the program.

A second kind of program has been to introduce reading circles for teenage single mothers. The first of these, Literature for All of Us (see reference list for website) was founded in Chicago in 1996 by Karen Thomson, and has reached 4500 young people. In this program, there is a weekly 90-minute book group, facilitated by an experienced leader, in which discussion of a book that members of the group read is followed by a poetry writing exercise in which members complete a set of sentences with prompts such as "I am ...". This exercise encourages members to explore themes they have read about. Another program, based on the same principles, "Literature for Life" (see reference list for website), was founded in 2000 in Toronto by Jo Altilia and has reached 1400 young people.

Informally, the website of Literature for All of Us has reported: "Over 65% of book group participants reported reading more often on their own after joining book group," and "Evaluations found significant developments in the use of critical thinking and problem-solving skills, two important goals of Social Emotional Learning. School staff also noted improvements in participants' behavior, which they attributed to the skills learned in book groups." The director of Literature for Life has reported that many of the people who have joined book circles "experience an increase in perspective-taking, empathy, and problem-solving as a result of their participation." A culture of literacy can begin to emerge within young families, and it helps prepare children for schooling. There are empirical indications that when parents read stories to their children, this is helpful for the development of literacy (e.g. Neuman 1996). So these reading circles can influence two generations, as well as boyfriends and extended

family of the young women involved. Long (1986) found that in reading groups, middle class women accomplish a valorizing of themselves as women, in ways that are often devalued by society. There is no reason why this kind of effect should be confined to the middle classes.

We do not know of any educational or therapeutic programs that have started to draw on the evidence for effects of fiction that we have discussed in the previous section, but for the future we may look forward to such programs.

Conclusion

In the five areas we have reviewed, there is evidence of a lively current interest and strong possibilities for the future. In our view this future needs to be interdisciplinary. Despite shared interests by researchers in the humanities and in psychology in such matters as human character, emotions, and the vicissitudes of the social world, there are barriers between disciplines, which have been standing for too long.

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