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CHAPTER 2

Learning from literature

Empirical research on readers in schools and at the workplace

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This chapter explores what learning from literature entails and how we can come to insights about what literature can mean in the lives of readers, what they may discover about themselves and others. Reading literary stories leads to higher scores on standardized tests for social skills (e.g., ‘reading’ other peoples’ minds) than reading non-literary stories (Kidd & Castano, 2013). The available research, however, does not inform us about what causes these effects, relevant knowledge for a variety of social contexts, including literary education and social competence trainings (e.g., for managers). We explore the methodological possibilities and limitations to test our assumptions about relevant factors, conducting interdisciplinary research by combining insights of the Humanities in textual processes with the methodological rigor of the Social Sciences.

Keywords: literariness; fictionality; narrativity; self-reflection; empathy

2.0 Introduction

The belief that we find the true value of literature in literature itself (enjoying ‘art for art’s sake’) seems to go hand in hand with the assumption that reading literature can change the reader for the better. Reminiscent of an Arnoldian tradition of literary education, these two conceptions of the functions of literature are not opposites. In fact, it was under this spirit that literature became a subject of university study in the early 19th century. Such a dual perspective is not unique to literary education. According to a 2013 report of the *Organisation for Economic Co-operation and Development* (OECD) we find similar conceptions of education in music, drama, dance, and visual arts: music may be valuable in itself,

but music education could also lead to better results in geometry; theatre is to be enjoyed for its own sake, but drama education could also increase self-esteem (Winner et al., 2013, pp. 21–56). However, there is troubling little evidence for these so-called “transfer hypotheses”.

The evidence for the effects of reading literature is not as flimsy. Central in the theoretical and empirical study of literature is a twin-set of hypotheses: (a) reading literature stimulates readers’ moral imagination, that is, it enhances their self-examination; (b) it deepens their understanding of what it must be like to be in the shoes of others, plausibly increasing empathy and compassion (see Hakemulder, 2000 for an overview of such claims; for a critical discussion of the evidence, see Koopman & Hakemulder, 2015).

This chapter holds that external and intrinsic values of literature are not a contradiction; they can go very well together. We will explore what literature can mean in the lives of readers, and what they may learn from it, focusing on what they can discover about themselves and other people. After critically evaluating the available evidence (in order to reveal what questions remain unanswered), we will look at implications for two specific learning environments: schools and the workplace. The issues that we engage with in this chapter – how literary reading impacts social skills, understanding, and self-reflection – are interesting both from the viewpoint of scientific curiosity and of social relevance. Finding out which exact factors stimulate such outcomes may seem more of a scientific endeavor, but it does have practical implications.

The purpose of our contribution is to illustrate the ways in which research and learning can be combined, so as to stimulate our readers to explore the functions of literature empirically. Scientific approaches to literature subject hypotheses to rigorous testing (van Peer, Hakemulder, & Zyngier, 2012; Van Peer, 2011). However, in every attempt to test hypotheses empirically, there are many openings for criticism and hence many opportunities for improvement. We invite our readers to help us take on the challenges that we identify as a conclusion of this chapter.

2.1 Available evidence

2.1.1 Understanding others

The type of challenges that research into literary reading faces are usefully illustrated by a publication in *Science* by Kidd and Castano (2013), an article that caused quite a stir since it presented results which supposedly answered an age-old question: does reading literature increase our understanding of other humans? Kidd and Castano claimed it does. In their experiments they asked participants

to read a number of canonical literary stories. These participants scored significantly higher on standardized tests for “Theory of Mind” (the ability to infer other people’s mental states; Leverage et al., 2011) than a group of readers who were exposed to non-literary stories. They also scored higher than a group that read expository texts.

A typical problem occurs, however, in the interpretation of these findings: when we compare the effects of reading one selection of acclaimed literary texts by canonical writers with another selection of popular fiction, as the authors did, there are probably many more differences between the two selections apart from their literary status. For example, it may be that by coincidence there are more characters appearing in the first (hardly a criterion for ‘literariness’). Because of the lack of experimental control over these factors one cannot be sure that it was ‘literariness’ that caused the effects. This holds for most studies that examine the effects of literature on empathy and reflection. Often, what caused the effects cannot be determined – in other cases, for example, whether it was the literary quality of the texts, or the discussion about the texts.

An additional problem in the Kidd and Castano study is the standardized tests used, most importantly the so-called “Reading the Mind in the Eyes-test” (Baron-Cohen et al., 2001). In this test, participants are shown pictures of the eye area of actors who are expressing an emotion and asked to choose the correct emotion word (e.g., ‘desire’) out of four alternatives. While it seems to become common practice to use this test to measure ‘empathy’ (cf. Mar et al., 2009), it has been shown that psychopathic and non-psychopathic individuals do not score differently on the test (Richell et al., 2003). We believe that more ‘real-life’ measures are needed to make a convincing case for effects of literature on social skills.

Finally, it is important to take into account that a literary text may not have the same effect on each individual reader. In order to have socially beneficial effects, a text may first need to move people in some way, for example by drawing them into the story-world (called ‘absorption’ or ‘transportation’ in the academic literature; e.g., Green et al., 2004) or by making them sympathize with characters. Some recent studies have started to shed light on these phenomena. In a study in which participants read short texts about depression, Koopman (2015) found that both one’s absorption in the story-world and one’s appreciation of the style were associated with prosocial behavior (i.e., donating to a charity) afterwards, and that sympathy for the character was associated with empathic understanding for people in a similar situation. Similarly, Johnson (2012) found that participants who felt more sympathy for a character were more likely to engage in prosocial behavior after reading. In a study in which participants read either a fiction story or a newspaper article, Bal and Veltkamp (2013) found that reading the story increased self-reported empathy (i.e., concern for others) only among those who felt absorbed

in the story-world. There still is a long way to go, however, in determining which types of texts manage to engage which type of people (e.g., Kuijpers, 2014), and under which conditions that engagement contributes to the development of social skills in the real world (e.g., Koopman, in preparation).

2.1.2 Knowing thyself

Claims about the effects of reading literature on self-reflection are mainly supported by qualitative studies. Typically, participants (mostly students or prisoners) are asked to write about their experiences with literature, describing how books changed their lives (e.g., Waxler, 2008), or producing their responses to passages they find striking (e.g., Sikora, Kuiken, & Miall, 2011). These reports are valuable, from our perspective. Yet, they do not give us evidence for a causal relation between exposure to literature and changes in self-perception, because of the lack of control over intervening variables. For example, the results can be influenced by social desirability (participants' responses might reflect what they think researchers want to hear rather than true changes in self-perception).

In addition to qualitative studies, there is also experimental work that indicates that reading literature affects reflection. Bird (1984), for instance, revealed an effect of a literary education program on a standardized test for critical thinking, including reflection on real-life issues. Research is currently being developed to test literary education programs, replicating these findings and applying them to secondary education (Koek, in preparation).

If there is one thing that is clear in the available research, it is that too little is known about when and why self-reflection occurs. Most studies do not make a systematic comparison between literary and other forms of reading (however, see Koopman, in preparation). But a few factors can be considered likely to stimulate a deeper personal involvement: some resemblance between the experiences of the readers and those of the characters (e.g., Koopman, 2015); emotional involvement of the readers with the story (e.g., Fialho, 2012; Bal & Veltkamp, 2013); perceiving the text as striking (Koopman & Hakemulder, 2015); and, finally, literariness. As to this last point, Halász (1991) found that while reading literary texts does not trigger more thoughts per se, it does evoke more personal memories than expository texts. This suggests that while literary reading may not necessarily lead to more reflection, it may very well allow for a deeper involvement of the self. Therefore, the quality of the reflection induced by literary texts might be higher than for non-literary texts, while the quantity is similar.

2.1.3 Challenges for research

As indicated above, there are many gaps in our current knowledge about potential positive effects of literary reading. Important questions for researchers are, for

instance, what factors stimulate self-reflection and the development of Theory of Mind. One useful avenue of research is finding out whether instructions (assignments, educational approach, providing background information about authors and texts) can enhance positive effects. A relevant question is also whether such effects occur for any reader or just for a small elite, that is, just a tiny group of highly educated students of English literature (cf. the point that Henrich et al., 2010 famously made about the very limited generalizability of almost all psychological research). Finally, a question covering both disciplines of Humanities and Social Sciences is what it is exactly in the literary text that causes the effects. In our opinion, future research would benefit from making a clearer distinction between effects of ‘literariness,’ ‘narrativity,’ and ‘fictionality.’ In Section 2.1.4 we discuss these aspects separately and give some suggestions for future studies.

2.1.4 Literariness, narrativity, fictionality

Many literary scholars suggest that ‘literariness’ is a text quality related to the unusualness and unconventionality of the language (for definition and further discussion of ‘foregrounding,’ see Van Peer et al., 2007) and that such textual features cause defamiliarization (for a review, see Hakemulder & van Peer, 2015). In addition, increased reading time for literariness has been reported (Miall & Kuiken, 1994). It seems plausible, as argued by Koopman and Hakemulder (2015), that when readers spend more time reading a passage, personal memories and other thoughts may emerge more frequently than might be found in response to more fast-paced, diverting reading (thrillers) and media use (games). This, in turn, may stimulate self-awareness and changes in self-concept. Future research could look into the generalizability of such influences of reading, and examine the role of literariness in more controlled situations to determine causality (see van Peer et al., 2012 for a practical introduction). In this respect, it is relevant to report the results of a recent study by Koopman (in press), in which she manipulated the amount of striking stylistic devices in a literary text about grief. Participants were either presented with a stylistically intricate text or with a version in which all striking expressions had been replaced by more everyday alternatives. Koopman (in press) found that reading increased participants’ empathic understanding for others who are grieving, but only in the stylistically intricate condition, suggesting a specific role for literariness in aiding social skills.

A second factor that we want to consider is ‘narrativity’. Within reader response research, there are a number of studies in which it is impossible to determine whether effects of reading ‘stories’ might not also have been obtained using other types of texts, for instance, self-help books or other expository materials (see for overviews Hakemulder, 2000; and Koopman & Hakemulder, 2015). Still, there are also quite a few studies suggesting that narratives in general may have a

persuasive effect (e.g., Green et al., 2004; Johnson, 2013). Such studies compare the persuasive effects of narrative information versus those of non-narrative information (e.g., Reinhart & Feeley, 2007). What these studies do not take into account, however, are the particularities of narrative. In the field of narratology (for a comprehensive introduction to this field, see Bortolussi & Dixon, 2003), one finds a number of testable hypotheses that could distinguish effective narratives from less effective narratives in terms of stimulating role-taking and helping people to understand better what it is like to be in the shoes of fellow human beings. For instance, it can be proposed that in complex narrations, with multiple narrative voices, the challenge for readers to determine the motivation of all the agents in a story is greater, and therefore their general Theory of Mind is also more likely to increase.

A third term that often appears in claims of researchers and theorists is 'fiction' (see Kidd & Castano, 2013). In an overview of the available research (Koopman & Hakemulder, 2015), we found hardly any evidence that fictionality per se (as opposed to a story being based on facts) plays a role in the effects of reading on self-reflection and empathy. However, Altmann et al.'s (2014) neuropsychological study does indicate that reading fiction stimulates readers to 'simulate' the events in their minds and to be more involved in Theory of Mind than when reading non-fiction. In this experiment, the differences could only be attributed to one factor: half of the participants was told they would be reading a fictional text, while the other half was informed it was a non-fictional text. Using a similar 'fiction'-instruction, Koopman (2015) failed to show any effects of 'fictionality' on measures of empathy and reflection, but she did show that those who thought the text had been non-fictional were also more absorbing. Since fictionality plays such an important role in literary theory and psychology (Oatley, 1999), we suggest that researchers need to take further steps in empirically testing whether fictionality stimulates reactions like involvement, empathy and reflection. To determine whether there is indeed a fiction effect, participants need to be presented with two identical texts, containing exactly the same information as either fictional or factual. In that case, potential differences in readers' responses can only be attributed to fictionality and not to other aspects of the text.

Literariness, narrativity, and fictionality seem three potentially interesting avenues for future empirical investigations. However, ideally, those future empirical investigations are not limited to strict experiments within laboratory settings. Thus far, our interests may have seemed predominantly scientific, concerned with concepts, theories and mechanisms. In the remainder of this chapter, we will illustrate how the implications of reader response research can go beyond satisfying our scientific curiosity. As we will demonstrate, many of the methods used in the empirical study of literature can be put into practice in educational settings and in the workplace.

2.2 Examples of research

In the present section we discuss the various ways in which empirical methods may help students understand their own responses to literature, and hence, stimulate self-reflection. To illustrate this, we present four different types of research that could be developed. We start by showing how qualitative research may uncover a self-modifying reading experience. Secondly, we introduce a way to test the effects of different approaches to literary education in terms of what students learn from literature. Thirdly, we focus on a simple statistical procedure that can be brought into the classroom in order to make readers more aware of the relation between stylistic elements and their personal responses. Finally, we show how the relevance of the research discussed in this chapter may extend beyond the classroom and into the workplace.

2.2.1 Exploring ways into aesthetic experiences

The first study reported in this section offers a glimpse into how empirical phenomenological studies of literary reading can contribute to the scientific study of literature. In fact, by making use of a hybrid of qualitative and quantitative methods, empirical phenomenological studies of literary reading have been bringing categories of experience inductively to greater distinctiveness, richness, and coherence through quantitative systematization. Thus, they contribute to the area by identifying and defining rich and coherent modes of literary reading. Particularly, the study here described helps to articulate varieties in reading processes.

Investigating how literary reading implicates the self and fosters changes in self-reflection, Fialho (2012) offered a typology of self-modifying reading experiences. The participants in this study were 48 psychology students from a Canadian university, who were frequent readers of poetry. They were asked to read “Miss Brill” (a short story by Katherine Mansfield), select six passages they found striking or evocative, and comment on each. The analysis considered both the *reader* (how they talked about their experiences) and the *text* (what textual qualities they responded to). Readers’ responses were analyzed according to a method based on lexical repetition and theme modification, resulting in two types of self-modifying reading experiences. These two types were marked by two different kinds of emotional engagement and style of subjectivisation that provided the context for the occurrence of changes in self-reflection: the first type, called “expressive enactment,” (cf. Sikora, Kuiken, & Miall, 2011) was characterized by (a) empathetic engagement with the mood of the story imagery; (b) blurred boundaries between self and narrator or story characters, suggestive of metaphors of personal identification; and (c) active and iterative modification

of emergent affective themes. The second type, “total enactment,” was characterized by: (a) sympathetic engagement with story characters; (b) blurred boundaries between self and others, including narrator or story characters, suggestive of metaphors of general identification; and (c) active and iterative modification of emergent affective themes.

Results indicated that the most representative readers in each type experienced changes in self-reflection through successive engagement with foregrounded passages. Yet, no strong correlations were found between frequency in passage choice and foregrounding in these two types of reading experiences. The differences were still more qualitative than quantitative in nature. In fact, in this study, different forms of changes in self-reflection were experienced by one out of four readers. In studies involving less avid readers (for instance, Kuiken et al., 2004; Sikora et al., 2011), this phenomenon still occurred in about 15% of the readers. Thus, it is perhaps not uncommon among students in general.

In addition to possibly enhancing social skills, the main impact of the phenomenon of self-reflection in literary reading seems to be turning reading into a meaningful life experience. In the current times, in which literary education suffers from unpopularity caused by “cold and clinical” approaches (Gribble, 1983, p. 32), this phenomenon could help make literary reading a meaningful experience in the literature classroom again.

Much about this phenomenon awaits further inquiries. For example, what particular literary text qualities foster modes of engagement like expressive and total enactment is still a contentious issue. Foregrounding might play a role. At the same time that phenomenological research is being conducted to map different types of reading experiences, its results are being applied in educational research. For example, an approach to reading where readers are asked to respond to foregrounded (striking and evocative) passages may be quite relevant for a pedagogy of reading, as the two studies below show.

2.2.2 Testing instructional interventions

The second study reported here (Fialho, Zyngier, & Miall, 2011; Fialho, Miall, & Zyngier, 2012), draws from Fialho’s (2012) work, testing the effects of an approach to reading that focuses on personal responses and affective resonance with literary texts in the literature classroom. This so-called “experiencing approach” uses responses to striking or evocative passages as a way into student-readers’ experiences of reading. In this study of pedagogical interventions, the researchers developed a set of “experiencing instructions,” tested against a set of “interpretive instructions,” focused on the more traditional tasks of literary analysis and interpretation.

The participants in this study were 17 first year Comparative Literature students in a Canadian university, attending a World Literature course. During a span of two weeks, they were asked to read two modernist short stories when attending six classes of fifty minutes each. In the first week, James Joyce's 'The Dead' was covered and in the second week, Clarice Lispector's 'The Daydreams of a Drunk Woman'. Randomized into two groups in a counter-balanced way, the participants working under the control condition followed a set of interpretive instructions while those working under the experimental condition followed experiencing instructions. Interpretive instructions focused on literary analysis and interpretation. A set of less typical experiencing instructions focused on reading characterized by personal responses and resonating affectively with the text (Rosenblatt, 1938; Miall, 2006; Kuiken, 2009; Fialho, 2011). Participants in both conditions completed four measures: three questionnaires and a response essay. The researchers also video-recorded small group discussions.

In this study, intervention effects were evaluated statistically. Differences were found in story-driven reading (Miall & Kuiken, 1995), with the control group scoring significantly higher than the experimental one. Thus, participants following the interpretive instructions focused on the plot and on story-line development rather than on beliefs and values and were less interested in the more literary aspects of the story. Classroom behavior and assessment also differed significantly. Students following the "experiencing instructions" produced more voluntary classroom participation. Among the differences observed, they were more likely to perceive what they learned as something valuable.

An even richer array of differences was revealed by means of corpus analysis of these students' response essays and proportion tests. For example, the word "experience" was more frequently used by students following the experiencing instructions (0.11% > 0.06% in interpretive) and the collocates they produced were more varied than the ones in the interpretive group. "As" was less frequently used by the experiencing group (0.95% < 1.10% in interpretive). A study of the collocations of this word showed that "as though/as if" was more frequent in the essays of the experiencing group, revealing their tendency to construct comparisons, whereas it occurred more frequently as an adversative or an additive discourse marker in the interpretive group's essays (e.g., "as well as"). These findings seemed to indicate that students following the interpretive instructions tended to focus on argumentation, definitions of experience and analysis. Those following the experiencing instructions were more imaginative in the sense of creating scenarios for possible comparisons between the world of the text and of their own and others.

The pronouns "I" and "my" occurred more frequently in the experiencing group's writings, whereas "me" had a higher proportion in the essays of the interpretive group (0.67% > 0.42% in experiencing; $p = 0.02$). It seemed that

participants following the experiencing instructions had a greater sense of agency, taking possession of the textual experience as their own.

The implications of these findings for literary education are at least twofold. First, they seem to indicate that “experiencing” and “interpretive” approaches (as described by Fialho et al., 2011; 2012) are not mutually exclusive and might be, in fact, complementary. Second, they may sensitize teachers for the need to better understand how students read and how instructions may affect the reading experience. In sum, these findings call for the need of more systematic investigations into pedagogical interventions.

2.2.3 Style and emotional responses

In the third study we report here, students of an introductory course to Literary Studies at Utrecht University ($N = 230$; M age 20.3, $SD = 2.1$, 82% female) were randomly assigned to read one of four stories, all about love. They read either Mansfield’s ‘Something Childish But Very Natural’, Chekhov’s ‘The Lady with the Little Dog’, Scott Fitzgerald’s ‘The Sensible Thing’ or Updike’s ‘New York Girl’. Within each story group, participants received one of three different reading instructions. In the ‘emotion group’ they were asked “Underline words or sentences that evoke emotions in you (both negative and positive)”. In the ‘style group’, participants were instructed to “underline what is remarkable to you, (remarkably beautiful, powerful, unusual, or strange).” Participants were asked to read as they normally would. Next, the researchers counted the number of times participants underlined the sentences in the stories, and averaged for the total number of words per sentence. Using the statistics software SPSS, they calculated the correlation between the number of times each sentence was underlined in the two experimental groups, thus: the correlation between emotionality and originality. The results showed the scores correlated strongly for Chekhov ($r^2 = .71$, $p = .003$), Mansfield ($r^2 = .66$, $p = .008$), and Updike ($r^2 = .68$, $p = .005$), and to a lesser degree for Fitzgerald but still with a tendency toward significance ($r^2 = .49$, $p = .063$). This means that for these texts, the more frequently a line was considered emotion-provoking, the more frequently it was also considered being formulated in a remarkable way. In Figure 1, the scores for the first 15 lines for the four stories are presented, with a separate line for the ‘style’ (in yellow) and the ‘emotion’ group (in green). The vertical axis indicates the number of underlining per sentence, with the sentence numbers on the horizontal axis.

If presented in class, these results may lead to discussions about the interrelationship between the two aspects of reader response as illustrated below. Because the ‘student-participants’ produce the materials themselves (their own responses to the texts), they may feel more involved in the discussions. In addition, combining research and teaching allows the students to compare their own responses with

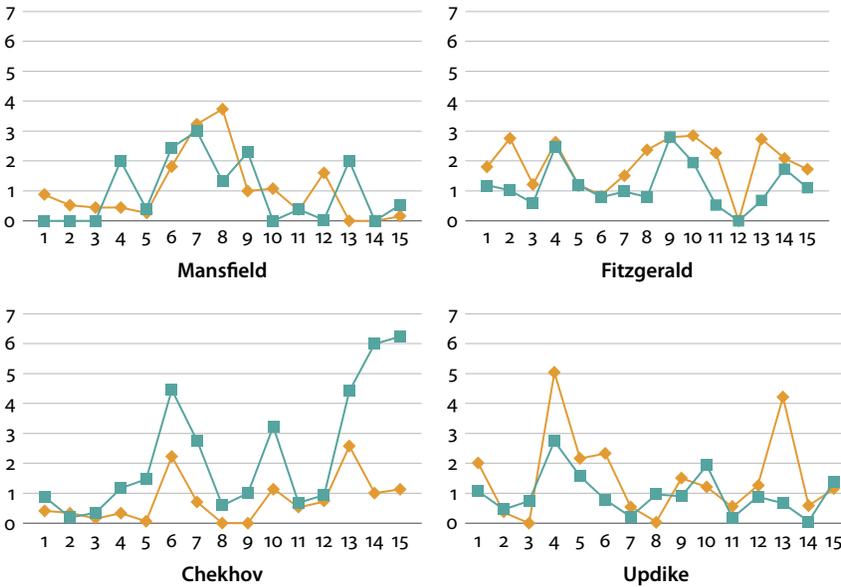


Figure 1. Emotion and style: number of times the text is underlined (y-axis) per sentence (x-axis) per group (style in yellow; emotion in green).

those of their peers, thus revealing the idiosyncrasies of an individual's responses to literature as well as aspects of reading experiences that are shared with others. This means that also interpreting the study's statistics should be part of the classroom discussion, which can lead to a better understanding of the meaning of test results, and that they do indeed require interpretation rather than that they present unambiguous answers to research questions.

Correlations are almost always multi-interpretable. In this study they certainly do not necessarily indicate a causal relation between style and affect: It may be that the authors chose particularly beautiful phrases when expressing emotional *content*; in that case it might be the content that caused the response rather than the style. Or it may be that it was not the (perceived) remarkable style that caused the effect on emotion, but rather the other way round: text sections that evoke emotions may have caused readers to ascribe special qualities to the style of the text. It may be more informative to look closely at the particular sentences that were underlined and see how the group of students as a whole responded to the sentences in order to make more sense of the statistical correlation. Let us take a look at the Mansfield text. In Figure 2 we see the first 15 lines of Mansfield's story. The larger the font, the more frequent the underlining by the 'style group'. The more intense the colour (leaning toward red), the more frequent the underlining by the 'emotion group.'

Whether he had forgotten what it felt like, or his head had really grown bigger since the summer before, Henry could not decide. But his straw hat hurt him: it pinched his forehead and started a dull ache in the two bones just over the temples. So he chose a corner seat in a third-class 'smoker,' took off his hat and put it in the rack with his large black cardboard portfolio and his Aunt B.'s Christmas-present gloves. The carriage smelt horribly of wet india-rubber and soot. There were ten minutes to spare before the train went, so Henry decided to go and have a look at the book-stall. Sunlight darted through the glass roof of the station in long beams of blue and gold; a little boy ran up and down carrying a tray of primroses; there was something about the people – about the women especially – something idle and yet eager. The most thrilling day of the year, the first real day of Spring had unclosed its warm delicious beauty even to London eyes. It had put a spangle in every colour and a new tone in every voice, and city folks walked as though they carried real live bodies under their clothes with real live heats pumping the stiff blood through.

Henry was a great fellow for books. He did not read many nor did he possess above half a dozen. He looked at all in the Charing Cross Road during lunch-time and at any odd time in London; the quantity with which he was on nodding terms was amazing. By his clean neat handling of them and by his nice choice of phrase when discussing them with one or another bookseller you would have thought that he had taken his pap with a tome propped before his nurse's bosom. But you would have been quite wrong. That was only Henry's way with everything he touched or said. That afternoon it was an anthology of English poetry, and he turned over the pages until a title struck his eye – *Something Childish But Very Natural!*

Figure 2. Style and emotion: the larger the font, the higher the frequency of words underlined (style group); the stronger the colour leans toward red, the higher the frequency of words underlined (emotion group).

As we can see, there are some words that stand out in both groups, for example the sentence full of imagery and color, 'Sunlight darted through the glass roof of the station in long beams of blue and gold'. But most remarkable to both groups is the sentence 'It had put a spangle in every colour and a new tone in every voice, and city folks walked as though they carried real live bodies under their clothes with real live hearts pumping the stiff blood through.' As the participants must have noticed, we see here how style contributes to the strength of the narrator's comments on the (not much of a) 'life' of city dwellers. Using the responses of both groups we can make a distinction between such literary effects and other effects: for instance, we also see a word like 'Christmas' or 'Spring' standing out; those seem to be remarkable for different reasons, maybe because they are powerful in the sense that they evoke imagery. One way to find out is to ask the students and invite them to speculate; we believe that this approach could be very informative to the 'student-participants' themselves, taking a closer look at what 'happens' in a text in relation to their shared responses.

2.2.4 Effects of narrative experiences in the workplace

In this final section we suggest how a better understanding of what we learn from literature could be the basis for student projects aimed at valorization (e.g. in community theatre projects, internships, health communication). However, we should admit, right here and now, that we do not have the evidence yet to support this. A current research project is aimed at strengthening the empirical basis for these assumptions (Brokerhof, in preparation). Recently, Bal et al. (2011) did argue that the effects of reading narratives may have applications in the workplace. Because people spend most of their adult time working in organizations where they have to cooperate with others, including managers, colleagues, customers, and patients, intersocial skills, of the sort encouraged and developed through literary reading, are essential in performing a job. Moreover, in the contemporary economy it has become more important for workers to be creative, innovative and to have interpersonal skills, and all of these may be influenced through reading, as much of the empirical research summarized so far has suggested. As noted above, the specific contribution of fictionality has been under-explored. In their theoretical article, Bal et al. (2011) explored the ways people may be influenced by fictional narratives in relation to their work-related attitudes and behaviors. They proposed a model that included the processes through which narrative fiction might transform people in relation to their work. To many, this is an important issue. In the Western world we see a great focus on how creativity and innovation in the workplace can be enhanced. Narrative fiction has been identified as one of the ways through which employees and managers in the workplace can become more highly engaged,

more creative and innovative (Alvarez & Merchan 1992; Rhodes & Brown 2005). Alvarez and Merchan (1992) have suggested that narrative fiction stimulates imagination and it is through the stimulation of imagination that people are able to understand others, create things, and be innovative. Hence, it is important to investigate whether fiction experience has any effects on people at work, and if so, how this process unfolds over time. Bal et al. (2011) argued that it is through being emotionally and cognitively transported into a story that people are more likely to change as a result of fictional narrative experience. Transportation refers to a process in which the reader becomes totally involved in the story, and in which all mental energy is focused on the narrative (Gerrig, 1993). When people are emotionally and mentally involved, they will be more likely to experience changes in schemas, or mental models people hold of their world. Support for this claim has been found in the study of Bal and Veltkamp (2013), which showed across two studies that readers reported significant higher levels of self-reported empathy over the course of a week when they became highly emotionally transported into a fictional story. These effects were not found for fiction readers who reported no transportation or for non-fiction readers.

We will present a study here that does not pertain to literature but to narrative film. Hopefully we will learn something, however, what potentially could be the effects of literary narratives. The study was conducted at a travel agency in the Netherlands (Sahtoe, 2011; Sahtoe & Bal, 2014). 62 employees working directly with customers took part in a field experiment. The aim of the study was to test whether experiences with narrative would have an impact on work-related behaviors. Based on earlier reasoning, it was expected that exposure to narrative would have an impact on employees, but only when they became emotionally transported in a story. The group of participants was on average somewhat less than 30 years old, and 63% were women. 32 were randomly assigned to a control condition, while the other 30 were assigned to the experimental condition. All participants received an email to fill out a survey and the participants in the experimental condition were invited to watch a film clip during working hours in a separate, closed room at their work, while filling out a survey directly before and after watching the clip. After one week, the participants were again invited to fill out a survey. Those in the experimental condition were shown an 8-minute fragment from the fictional movie "Turistas", in which a group of tourists were followed during their holiday in Brazil. The group was confronted with various misfortunes such as a bus accident, being lost, and a robbery. The movie fragment was chosen because it was highly relevant to the work of the employees, which included arranging holiday trips for customers. Empathy, helping behaviour at work, and emotional transportation (Bal & Veltkamp, 2013) were measured with existing, validated scales, before, directly after, and after one week for the experimental condition, and twice

for the control condition (with a one week time lag). All measures were obtained via self-reports, and hence, workers filled in scales pertaining to empathy for their customers, helping behaviour, and emotional transportation into the film clip.

Statistical ANOVA-tests and regression analyses were conducted to test whether there were significant changes between the two groups over time, and whether transportation into the fictional narrative explained potential differences. While there were no significant differences between the experimental group and the control group in levels of empathy and helping behaviour at the first measurement, ANOVA tests (to see if there were differences between the two conditions) indicated that after a week the experimental group showed significant higher levels of empathy as well as helping behaviour. Hence, it can be concluded that in comparison to the control group, the experimental group showed higher empathy and helping behaviour towards customers after one week had lapsed. However, subsequent tests did not show that those high in emotional transportation increased more strongly in empathy and helping than those low in emotional transportation. Hence emotional transportation did not affect the increase in empathy or helping.

From this study, it is shown that narrative fiction may have an important impact on the behaviour of employees at work, and that narrative fiction may alter the way people view themselves and others in relation to their work. It was hypothesized that people would become emotionally transported and feel sympathy for the people in the movie, and that because of this they would become more empathic with customers, and more likely to help them more. It was found that regardless of levels of transportation, people who watched the film clip were more likely to feel empathy and help customers over time. Thus, it can be concluded that there is an important link between activities people normally pursue in leisure time, such as reading novels and watching movies, and their attitudes and behaviour at work. In the present context it is important that the next step in this research would be to test these effects for reading narrative fiction. For now, however, we do not see convincing arguments that they would not be the same as for watching a movie (cf. Green, Garst, & Brock, 2004).

Fiction can have important effects on how readers think, but also how they behave, for instance in relation to others. Social behaviour is a crucial aspect of performance at work, and therefore people may benefit from narrative fiction in doing their work effectively, communicating with others in the workplace, and thus to learn from fiction. The study we discussed above is admittedly not about literature but about its effects over readers. We suggest that one of the possible ways to make literary education more socially relevant is to explore how theories about the effects of literature might be operationalized as in this experiment.

2.3 Conclusion

Besides being a pleasurable activity, reading literature is sometimes assumed to have carry-over effects that will influence readers' activities in other domains. One such 'transfer-hypothesis' is that reading literature will enhance social competence and self-knowledge. In this chapter we have discussed the various ways in which empirical methods may help students and workers to understand their own responses to literature, and hence, stimulate self-reflection. Second, we have seen that there is reliable evidence that reading literature stimulates Theory of Mind, empathy, and even prosocial behavior. We illustrated ways in which current projects in the empirical study of literature can be conducted, and how these may contribute to learning inside and outside schools and universities.

The aim of the line of research that we propose is to discover the processes through which reading literature inspires learning. We mentioned three possible factors that can be explored through future research, namely literariness, narrativity and fictionality. These factors also played a role in the case studies that we presented, but they can be examined more systematically and in more detail in future work. It seems that readers' imaginations are essential in the processes that we discussed in this chapter (e.g. readers imagining themselves in the position of a character). Therefore, one of the main challenges ahead will be to assess imagination, and, more specifically, how to measure imagination provoked by fiction. While it is essential that we understand the fundamentals of these processes, it is clear that if future researchers also focus on the practical applications, findings may help to make the impact of reading more profound and extend the range of social contexts in which this impact can be realized.

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