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Reading Fiction Positively Impacts Empathy: a pedagogical legend?

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The idea that reading and reflecting on fiction, in particular works of fiction that engage the reader imaginatively in the struggles and suffering of strangers, is conducive to the development of ethical capacities such as empathy and moral perception has the trappings of a pedagogical legend—that is, a belief about learning that is widespread and persistent but generally indifferent to evidence (Baillargeon, 2013). So often repeated and yet with so few detractors, the hypothesis has been cited by Martha Nussbaum in favor of making novel-reading a requirement of college curriculum (Nussbaum, 1998; Nussbaum, 2001) and as an essential aspect of the training of lawyers and judges (Nussbaum, 1995). Steven Pinker (2011) advances the emergence of novel-reading as an explanatory factor in the decline of violence in the West. Medical educators have seen in the idea a way to promote empathy in medical students (Charon, 2000; Hunter, Charon, & Coulehan, 1995; Shapiro, Rucker, & Beck 2006). It is the premise of a criminal rehabilitation program that has been introduced in prisons in the United States and the United Kingdom (Trounstine & Waxler 2005) and is a source of inspiration for the use of literature as a means of fighting prejudice and enhancing social skills among young children (Selman, 2003; Solomon, Watson, & Battistich, 2001). This paper considers the claim that reading literary fiction is conducive to empathy understood as a basic ethical capacity and personal disposition. The first section introduces Baillargeon's (2013) concept of a pedagogical legend and develops a set of simple criteria for evaluating whether a particular claim about learning or development constitutes a pedagogical legend in Baillargeon's sense. The second part of the paper seeks maximal clarity about the hypothesized link between reading novels and the ability to empathize. For the purposes of this section, we rely on Martha Nussbaum's (1995; 1998; 2001) influential account, which has elaborated on and revisited repeatedly in her writings on moral education and moral development over the last 20 years or more. The third section provides a brief review of the limited direct empirical research relevant to the question. Returning to the evaluation criteria set out in the first section of the paper, in the final section argues that, despite the considerable limitations of the evidence for the fiction-empathy link, it is sufficient for us to conclude that the claim has some empirical warrant.

Pedagogical legends

Anyone who has regular contact with the world of school-based education will be aware that many dubious beliefs about teaching, learning and development circulate widely among teachers. Seeing close parallels between such beliefs and urban legends, in particular with regard to the features that make both so alluring and hence susceptible to rapid propagation, Baillargeon (2013) labels them 'pedagogical legends.'

Urban legends are popular stories which are at once unbelievable and, for one reason or another, extremely compelling. Usually transmitted by word of mouth or by other informal means, urban legends are stories that are too good—or too gross, too funny, too bizarre, too tragic—not to be true. Who could forget the story of the housewife who went to dry the cat (or was it the baby?) in the microwave?

To be more precise, urban legends typically possess the following two features (cf. Baillargeon, 2013).¹ Urban legends are apocryphal. Their origins are unknown, dubious or unimportant. We hear them from a person we know and trust and who is usually completely convinced that their story is true. This can give an urban legend an air of credibility. Second, they are realistic. Though outlandish, urban legends are not impossible. They are not pure fantasy. For all the layperson

¹ The examples in this section were taken from the website snopes.com which is dedicated to cataloguing and assessing urban legends.

knows, the story, though unlikely, really could have happened to someone or be true (e.g., Sex advice columnist 'Dr Ruth' Westheimer served as a sniper in the Israeli Defence Force). Further compounding the believability of an urban legend is that is, urban legends are often traceable back to a real event or some fact that has been distorted or exaggerated. Urban legends, that is, often contain a grain of truth. An example to illustrate is the rumour that the Great Wall of China is the only man-made structure visible from the moon.

Three further but less essential characteristics contribute to an urban legend's believability: truthiness, moralizing, and benign. Following the comedian Stephen Colbert's usage, a claim is truthful when it just seems intuitively right to the person asserting it (or hearing it asserted) regardless of any evidence they might or might not have for the claim. An urban legend is truthful, in other words, when it is consistent with the hearer's prior beliefs or values. For example, there is an apocryphal story that the television personality Rosie O'Donnell, a prominent 'liberal' and openly gay US comedian, got an ISIS tattoo in support of Islamic State's 'struggle against Western imperialism.' Because people apply less skepticism to stories that confirm their beliefs than they do to stories that go against them (see Ditto & Lopez, 1992), conservative Americans would be much more likely to think that anecdote is true than liberal Americans would. Many urban legends, furthermore, are moralizing in the sense of being cautionary tales. They express a life lesson that can be drawn on to avoid harmful mistakes or accidents (e.g., Baby left in car by forgetful parent dies). Like a fable, urban legends can have heuristic value that is independent of their epistemic value. Lastly, more often than not, an urban legend is entirely benign. Whether or not it is true or false has no significant effect whatsoever on the lives of either the person telling the story or the person hearing it. This feature is what makes urban legends good entertainment. In the end, whether or not the story is true doesn't really matter.

Now, even if a story or claim possesses all six characteristics just enumerated, it cannot be considered an urban legend unless it meets one further criterion. Urban legends are not true. For our purposes, and without getting too Popperian about it, let us recall that descriptive, synthetic statements can be untrue in one of two ways. They can be untrue in the sense of having been 'falsified' (i.e., shown to be untrue) by sufficient reliable evidence or they can be untrue because they are formulated in such a way that they are not amenable to empirical evidence. Statements of the latter kind are untrue in the sense of being 'unfalsifiable' or 'indeterminate.' So, for example, the claim that 'all U.S. colleges have regulations specifying how long students must wait if an instructor fails to appear at the beginning of a scheduled class, and these wait times vary depending upon the academic rank of the instructor,' is false in the former sense. The widespread belief that 'we only use 10% of our brains' is false in the second sense insofar as it is so generally formulated as to be meaningless and hence impossible to confirm or deny.

We can see, in Baillargeon's (2013) critical appraisal of current pedagogical legends, two main categories of pedagogical legends. One category comprises specific pedagogical interventions which are practiced or endorsed by large numbers of teachers because they are (wrongly) believed to be effective or useful. In this category we could place educational fads or fashion like Brain Gym, listening to classical music to improve cognitive abilities, and the introduction of regular 'fasciatherapy' sessions in schools to promote children's 'balancing' and 'holistic well-being.' In the other category are more general claims about the psychological, neurological or even physiological processes that underlie learning and development. In the economy of practice discourse, the role that this class of pedagogical legends plays is to provide (false) justification for specific instructional approaches or educational objectives. In this category we find the concept of 'learning styles' and the cognate notions of 'right-brain versus left-brain learning' and 'multiple intelligences.'

According to what epistemological criteria should we consider a particular belief about teaching, learning and development a pedagogical legend? Taking inspiration once again from Baillargeon (2013), let us think of the issue in terms of a spectrum of credibility. At one end of the spectrum, there are educational beliefs that have been supported by multiple, convergent, and scientifically credible findings. Beliefs that fit this description are rare in any field of practice and no less so in education. One example, though, might be the claim that level of maternal education achievement (i.e., highest degree obtained) is the best predictive factor for literacy outcomes among school-aged children (see Snow, Tabors, & Dickinson, 2001). Skeptics notwithstanding (e.g., Davis, 2013), it seems to me that in the so-called “reading wars” between proponents of phonics versus whole language learning, the research has come out very strongly on the side of phonics—at least with regard to its use in the narrowly circumscribed context of children’s first attempts to learn the basics of reading and writing. On the other end of the credibility scale are educational beliefs which, according to any informed, balanced reading of the evidence, would have to be considered patently false, and this for one of three reasons: because they have been disconfirmed by extensive, converging, and directly relevant research findings (e.g., learning styles; see Cuevas, 2015); because they cannot be assessed empirically due to their reliance on vague or pseudoscientific concepts (e.g., fasciatherapy; see Baillargeon, 2013); or because they constitute unwarranted extrapolations from or gross distortions of reliable scientific findings (e.g., the Mozart effect; see Chabris, 1999).

Seeing that pedagogical legends sit at the extreme incredulous end of the credibility spectrum, we are not only in a better position to articulate the epistemological standards for determining whether a particular educational belief constitutes a pedagogical legend but also to see clearly why it is imperative that educators work to identify pedagogical legends and minimize their influence on educational decision making. The first thing to appreciate is that, according to the credibility scale, the overwhelming majority of beliefs about teaching, learning and development that inform teachers’ practice lie somewhere in the expansive grey zone between pedagogical legends and well-supported assertions. Second, compared with the elusive (and contested) search for ‘what works’ in education (cf. Biesta, 2010), it is relatively easy find out whether an educational claim is a pedagogical legend. You don’t need a mountain of research. If the claim is well formulated, even a single directly relevant, well conducted study that supports it would be sufficient to nudge it out of the pedagogical legend category and into the densely populated grey zone of partially supported claims. Third, even though the evidentiary standards here are mighty low, pedagogical legends nevertheless appear to influence in professional decision making in education. Although basing one’s practice on patently false ideas and engaging in educational activities that are truly useless will rarely cause direct, concrete harms to pupils, teachers do seem to have ethical grounds to eradicate pedagogical legends from their practice. As commentators point out repeatedly, the primary harm associated with the influence of popular pedagogical misconceptions on teacher practice comes in the form of wasted resources: money, classroom time, and teacher preparation and training efforts (Baillargeon, 2013; Cuevas, 2015; Dekker, Lee, Howard-Jones & Jolles, 2012; Gura, 2005; OECD, 2002). The most widely reported example of this phenomenon was probably the case of Georgia State governor Zell Miller who, in 1998, earmarked several million dollars from the state budget to fund the purchase and delivery of a recording of classical music to families of all newborn children in the state. The legislation, now widely considered an embarrassment, was based on a hasty interpretation of neuroscience research on the benefits of exposure to classical music on cognitive development (i.e., Rauscher, Shaw & Ky, 1993). The resources wasted on this initiative, however, surely pale in comparison with the untold hours spent by countless well-intentioned teachers toiling over lesson plans to make sure that they are not biased against the creative-minded ‘right-brained’ learners in their class.

Indeed, it may be in this respect that pedagogical legends differ most significantly from urban legends. Because of the influence they can have on the choices teachers make about which activities to engage in and on how educational administrators allocate resources, pedagogical legends are rarely entirely benign.

The link between reading fiction and empathy: origins and truthiness

As stated at the outset, the notion that reading fiction develops moral capacities like empathizing, perspective-taking and moral sensitivity looks on the face of it like a pedagogical legend. In light of the previous section's discussion, we can now see that it indeed does possess some of the features of pedagogical legends.

First, the belief is widely circulated among educators with apparently little regard for its evidentiary base. As Pinker (2012) points out, the origins of this notion—whose contemporary applications, we saw, range from early childhood education through to professional education and prisoner rehabilitation—can be traced back at least as far as the 18th-century European when, in literary circles, the novel was widely touted as an important innovation in emotional arousal and imaginative transportation (cf. Eliot, 1883). In times when few travelled more than a few miles from their birthplace, it is easy to see how the novel occupied a uniquely privileged position as a window onto people, places and events that would have otherwise been scarcely unimaginable to the ordinary reader. Later, and as is well known, the particular style of novel Nussbaum (2001) refers to as the 'social realist novel' became one of the pillars of the social justice movements of the 19th and 20th centuries. Works by Charles Dickens, Mark Twain, John Steinbeck and Harper Lee have all been credited with playing an instrumental role in shifting public opinion in more progressive directions (Keen, 2007; Nussbaum, 2001; Pinker, 2011). Given this pedigree, it is probably safe to say that nearly every educator working in the area of literature, from preschool to postdoc, has not only heard of the link between fiction and empathy but takes it essentially as granted.

In addition to its apocryphal character, the claim that reading fiction makes people become more empathic is also truthful—not just in the sense of being plausible, which it undoubtedly is, but also to the extent that it coheres with the powerful vicarious experiences many people have when they read fiction. The imaginative impact that reading can have is vivid and undeniable. To illustrate with a personal example, I recall reading with my children an autobiographical graphic novel titled *El Deafo*, which takes the reader through the childhood of a girl who lost her hearing at age 4 due to meningitis. Reading the book, I was struck by the fact that, despite the main character's utter lack of heroic qualities—her reactions to the insensitive treatment of other children towards her as a deaf person are typical and completely predictable—and the work's rather banal storyline, the sheer fact that I knew about the fateful and cruel circumstances of her becoming deaf and how it led to various significant deviations from her having a 'normal' childhood had the double effect of conjuring up spontaneous sympathy for the main character and of inciting the inclination to really root for her as she faced the numerous hurdles thrown up by her deafness. The narrative framing also seemed essential to evoking 'the judgment of similar possibilities' (i.e., the thought that 'that this could have happened to me or someone close to me'), one of the three cognitive components that Nussbaum (2001) identifies as being constitutive of 'rational compassion.' Personal experiences of imaginative engagement with a book are unchallengeable but does the fact that readers sometimes empathize with characters in books amount to evidence that reading literature is conducive to becoming a more empathic person? To answer this question, the posited link between fiction reading and empathy needs to be articulated clearly.

Articulating the fiction-empathy link

To do so, I will draw primarily on Martha Nussbaum (esp. 2001) who, as mentioned in the introduction, has long been a leading advocate of the study of literature as a means of countering bias and increasing the sense of social solidarity in modern democratic societies. Nussbaum's assertion that reading novels that engage the reader in the narrative of their characters' suffering is favorable to the development of affective perspective-taking comes with certain assumptions which, once laid bare, point to the kind of evidence that would constitute relevant evidence for the claim and help us appreciate the educational significance of reading fiction as a form of moral and citizenship education.

The first assumption is about the definition of the key theoretical concept. For Nussbaum, affective perspective-taking (the terms she uses are "compassion" and "rational compassion") is not merely an *ability* or *capacity* but a virtue-like habituated disposition. That is, possessing it does not just mean that a person *can* see a situation from another person's point of view and *potentially* take it into consideration as equally valid but does so regularly, habitually and accurately in everyday social interactions. In this sense, we can see that the disposition in question here parallels, in broad outline, the one that recurs in the ethics and moral developmental literature as a marker of moral maturity or ethical sophistication and discussed under various headings: 'the moral point of view,' (Baier, 1960) 'the post-conventional perspective,' (Kohlberg, Levine & Hower, 1983) 'the principle of universalization (U),' (Habermas, 1994) etc. Where Nussbaum's account of ethical impartiality differs most from traditionalist Kantian accounts, however, is the Aristotelian role she attributes to perspective taking in moral psychology. When overlaid with appropriate, rational emotions, perspective taking is not just able to motivate appropriate, ethically necessary action. Rather, Nussbaum holds that being motivated to act ethically on the basis of appropriate emotions, informed by a balanced reading of relevant facts and an accurate understanding of the potential impact of different courses of action on concerned parties' basic well-being, is one of the defining characteristics of cultivated humanity.

Without making any attempt to establish a detailed regime that would be necessary to achieve the desired educational effect, a second assumption in Nussbaum's treatment of the fiction-empathy link is that there is a causal relationship between reading fiction and the acquisition of empathy as a virtue. The idea is that reading literature provides artificial or controlled experiences of affective perspective-taking which, when repeated, create patterns of thought, perception and action that then become activated in parallel real-world situations. Here we can see a clear alignment with the experiential approach to learning associated with John Dewey (e.g., 1938) and, more recently, elaborated in experiential or 'practice-based' approaches to professional formation. To be sure, Nussbaum is not asserting that acquiring the disposition of affective perspective-taking is impossible without reading literature, only that reading literature on a regular basis (as, for example, in a series of mandatory classes within a program of studies at university but more probably as an activity that one enjoys and engages in regularly from early schooling onwards) facilitates its acquisition and strengthens the disposition.

Finally and most controversially perhaps, Nussbaum posits an internal relationship between the potential of a work of fiction to engage the reader imaginatively in the suffering of its protagonists and the literary merits of a work. She writes,

There is a *prima facie* and general correlation between artistic merit and the ability to engage the personality at a deep level. The fact that Sophoclean tragedy inspires compassion for human suffering and the fact that it is great and powerful poetry are not

independent facts: it is the poetic excellence that convey compassion to the spectator, cutting through the habits of the everyday (Nussbaum 2001, p. 433).

Nussbaum does not deny that other art forms such as music, film and plays can also provide experiences that are conducive to the development of affective perspective-taking as a disposition. However, the assumption that the kind of literature that is appreciated by literary scholars is inherently conducive to imaginative transportation into a work of fiction allows Nussbaum to at once assign a special educational status to literature and to justify a curriculum based on the canon of 'great literary works'.

To summarize, then, Nussbaum's account of the positive impact that reading fiction has on dispositional empathy can be analysed in terms of a kind of developmental process that involves three discrete steps. The first step is experiential: reading about unfair or avoidable hardships faced by fictional characters arouses feelings of sympathy or compassion. The second step is habitual: the repeated experiences of vicarious, compassionate involvement in others' suffering that occur while reading fiction increase one's sensitivity to others' suffering in situations of human contact outside the artificial reading situation. The third step is behavioral: increased empathy manifests itself behaviourally by dampening exploitation tendencies and an increase in fair-minded, helping and even altruistic acts towards others.

What kind of evidence do we need?

The use value of this simple analysis is that it allows us to see exactly what kind of evidence would be needed in order to pass judgement on whether the posited link between reading fiction and empathy is a pedagogical legend.

The first step corresponds with people's subjective experiences of empathizing with fictional characters while they read. As suggested above, that people do empathize with characters while they read fiction can be considered something of a truism. Having said that, however, theoretical work, in particular by Oatley (1999), emphasises the close psychological affinity between the imaginative experience of reading and lived experiences. Oatley (1999) depicts the experience of reading fiction as a highly realistic mental simulation of real-world experiences and suggests that imaginative involvement with the characters and events in a story is the main driver of reading as an emotional experiences. Indeed, limited neuroscientific evidence provides some triangulating support for Oatley's account. Gallese (2001) found, for example, that when people hear about another person experiencing certain emotions (as when they read fiction) the same neurological networks are activated as when they experience the emotions themselves (see also the discussion of this issue in Mar, 2004).

I interpret the third, behavioral step in the fiction-empathy link as corresponding with the so-called empathy-altruism hypothesis which has been exhaustively investigated in several research programs in social psychology. Work by such eminences as Batson, Krebs, Hoffman and Davis have at this point left little doubt that, as a general rule, there is a causal relationship between empathizing and prosocial behavior. 'Empathic concern produces altruistic motivation,' as Batson (2011, p. 29) phrases it. The relationship between empathizing, altruistic motives, and prosocial behavior is of course far more complex than the simple equation 'more empathy, more helping.' As Bloom (2014) reminds us, both sides of the equation have been shown to be highly vulnerable to by various well-documented mediating factors such as empathic bias which comes in different forms (here and now bias, familiarity bias, in-group bias, etc.) and situational factors (the bystander effect, context-driven competition with egoistic motives, etc.). What is more, the very notion of an 'altruistic motive' has been the subject of a dizzying array of theoretical

interpretations (for a summary and overview see Sober & Wilson, 1998). Nevertheless, several decades of careful research into the question in social psychology leave little doubt that, all things considered, empathic concern towards others in an aversive state does motivate behavioural responses aimed at attenuating the perceived suffering. In my reading of the state of the research in social psychology, then, the case is essentially closed on this once controversial and theoretically difficult question. Empathy research seems to have moved on to explore how empathy and its composites (intrinsic prosocial motivation, perspective taking, the ability to accurately recognize and respond appropriately to other's emotion) relate to other human goods like performance at work, productivity and creativity (see, for example, Grant, 2008; Grant & Berry, 2011).

Remaining, then, is the second, habitual step which seems to be the one that is most in need of evidential support. As suggested above, we do not need to find out whether people have empathic experiences while reading literary works. We know that they do already—or, more accurately, that *some* people do, *sometimes*. For its part, the empathy-altruism step has been the subject of at least three major book-length reviews of the literature (Batson, 2011; Davis, 1994; Hoffman, 2001) which all converge towards the conclusion that the hypothesized link between empathy and altruism is well grounded empirically. A hypothesis that is controversial, in the sense of not having received anything like the detailed treatment to which the empathy-altruism hypothesis has been subjected, is that there is a causal relationship between the experience of empathizing with characters while reading fiction and the development of the generic ethical disposition of affective perspective-taking. Indeed, precisely this concern is raised in the evaluation research on the prison-based criminal reform program 'Changing lives through literature' (see Waxler, 2008). The program, which involves setting up prison reading clubs made up of a group of prisoners, a judge, a university professor and a probation officer, has been a real success in reducing recidivism rates among participants. But even the authors of the program remain skeptical about the actual mechanism behind the behavior change, asserting that the social leveling experience that the program creates may be a factor that is as or even more important than the opportunities for imaginative engagement that reading affords (Waxler 2008). So, what evidence is there that reading fiction positively impacts empathy? It is to this question that we now turn.

Overview of the evidence on reading fiction and dispositional empathy

Although a substantial number of behavioral studies have sought to explore different kinds of narrative framing effects (e.g., point of view, prior familiarity with the theme of the narrative, the reader's degree of imaginative involvement; see, for example, van Peer & Maat, 1996, Hakemulder, 2001) on readers' sympathy reactions and changes in readers' attitudes towards the characters in stories, the social groups the characters represent, and the socio-ethical issues depicted in fiction (e.g. same-sex marriage, gender equality, abortion; see, for example, Green & Brock, 2005, Green, 2004), for reasons discussed in the previous section, this section's review of the research will be limited to studies on the impact of exposure to fiction on empathy understood as a personal disposition or trait. A search of the psychological literature for articles meeting these criteria and published in peer-reviewed journals came up with four correlational studies and one experimental study dealing directly with the question of influence of reading fiction on dispositional empathy.

Correlational Research

The first study we will consider, conducted by Avram and Aviram (2009), assessed the relation between story reading habits at home on various aspects of kindergarteners' socioemotional and literacy development, including empathy. The study, which involved 40 mother-child pairs, compared the frequency of storybook reading at home, mothers' expertise in choosing books (i.e., the quality of books read by mothers), and maternal education to their children's empathy. Empathy was measured using a blinded third-party assessment wherein kindergarten teachers were asked to assign a relative empathy score to each of the children in their classes. Some of the class members were study participants, others were not. The empathy ranking system was meant to measure empathy as a personality trait of the children and was based on a definition of 'empathy' provided by the researchers and the teacher participants were asked to make judgments by referring to question prompts such as 'Pays attention to other people's feelings' and 'knows which feelings suit different situations.' Avram and Aviram (2009) found that, of the three storybook reading measures, only maternal choice of quality books correlated significantly with children's empathy. Maternal expertise in choosing books was measured by assessed the degree to which mothers' evaluation of book quality were consistent with the assessment of the same books by 'experts on children's literature.' The closer the mother's ratings matched those of the expert, higher the quality of the books the mother would choose to read to her children, or so the researchers reasoned. To explain this unexpected finding (maternal education and frequency of reading did not correlate significantly with children's empathy), the authors advanced the following explanation. Mothers who are themselves more empathic tend to choose books that represent more complex emotional scenarios and, as it turns out, one of the characteristics that children's literature experts consider as a sign of literary quality is the psychologically convincing portrayal of characters and relationships. The combination of high socioemotional development on the part of the mothers, combined with repeated opportunities to engage in discussions about socioemotional issues afforded by the choice of books, the authors argue, is likely to be particularly supportive of young children's emerging empathy.

The second relevant study, similarly small in scale to Avram and Aviram's (2009), is an evaluation of a medical humanities program by Shapiro, Morrison and Boker (2004). About 20 first-year medical students volunteered to participate in periodic study sessions—they occurred for one hour, twice monthly for eight weeks—where the group did in-class readings of 'poetry, skits and short stories' dealing with the theme of medicine, health and illness. During the discussions following the readings, the students were coached by their teachers to understand and identify with the point of view of the various characters involved: family members, the patient, the physician, etc. The researchers administered a number of psychometric tests at two times during the intervention, pre and post. Two of the measures they used—i.e., the Balanced Emotional Empathy Scale (BEES) and the Empathy Construct Rating Scale (ECRS)—were designed to probe dispositional empathy. As far as I could tell from the description in this paper, the ECRS is a self-report assessment designed to measure empathy in what could be described as a therapeutic sense (listening attentively to others and understanding and caring about their perspective). The BEES also uses a self-report scale but it measures 'the extent to which the respondent can feel others' suffering or take pleasure in their happiness' (Shapiro et al, p. 79). The results were that the literary experience of the students had a statistically significant impact on affective empathy (as measured by the BEES) but not on therapeutic empathy (as measured by the ECRS).

I now turn to two related studies led by Raymond Mar (i.e., Marr, Oatley, Hirsh, dela Paz & Peterson, 2006; Marr, Oatley & Peterson, 2009) which examined the hypothesis that exposure to narrative fiction is positively associated with empathic ability and, inversely, that exposure to non-fiction is negatively associated with empathic ability. To assess participants' fiction reading habits,

the Author Recognition Test was used in both studies. This measure, which consists in a series of author name recognition tasks, assumes that the more people read, the more accurately they will be able to identify authors' names on a list. Although this approach may seem esoteric, it was designed by Stanovich and West (1989) to overcome the issue of social desirability that had been a problem for previous reading habit assessments, and it has been extensively validated (see Cunningham & Stanovich, 1997; West, Stanovich & Mitchell, 1993). To measure empathy, both studies also used Davis' standard multi-dimensional Interpersonal Reactivity Index and the Mind-in-the-Eyes Test of facial emotion recognition (Baron-Cohen, Wheelwright, Hill, Raste, & Plumb, 2001). The results of the first study, which involved 94 undergraduate students, confirmed the hypothesis but the study design left an important question open. What if naturally empathic individuals are simply drawn to fiction whereas naturally unempathic people find non-fiction more enjoyable to read? To rule out this third-cause explanation for the correlation found in the first study, the research was repeated but this time measures of personality (the Big Five Inventory) and sociability (the Social Network Index) were added. Of the personality traits making up the Big Five Inventory, Openness was established as the correlate of exposure to narrative fiction based on unpublished pilot tests conducted by Mar and colleagues. After controlling statistically for personality and sociability (the study also sought to rule out other explanation neglected in the previous study, like age, gender and English fluency) the same conclusion was reached: reading frequency, as measured by the Author Recognition Test predicted performance on the two empathy tasks. Approximately 250 students participated in Study 2.

Mar concluded this cycle of correlation research on the link between fiction reading and empathy ability by calling for experimental research to investigate the causal direction of his research teams' 'observed association between exposure to narrative fiction and social ability,' a challenge which was subsequently taken up Bal and Veltkamp (2013).

Experimental Research

Bal and Veltkamp's paper, which received considerable media attention when it was published in the Public Library of Science in 2013, presents two experimental studies to test the hypothesis that, 'fiction reading is positively related to empathy across time, but only when the reader is emotionally transported into the story' (p. 4). The investigation of emotional transportation as a factor draws on an assertion that is repeatedly advanced in the theoretical and empirical literature on the effects of fiction reading on social skills: that imaginative projection of the self into the story is the key to understanding the relationship (see, for example, the discussion of this issue in Mar, Djikic, & Oatley, 2008). Bal and Veltkamp (2013) conducted two similarly designed studies involving a total of approximately 150 university students. Participants were randomly assigned to a condition group, which read a chapter from a Sherlock Holmes book and/or a chapter from José Saramago's novel *Blindness*, and a control group which read newspaper stories of a similar length on real traumatic current world events. Empathy was assessed before the reading (T1), immediately after the reading (T2) and one week later (T3) using, like Mar's research, Davis's (1980) Interpersonal Reactivity Index. Imaginative involvement in the reading was measured using the Emotional Transportation Test (Busselle & Bilandzic, 2009) at T2. Both are self-report measures of the targeted constructs but efforts were made by the researcher team to hide the intentions of the study from participants in order to reduce an observer effect. The studies also included a test of narrative understanding to allow the researchers to exclude from the study participants who did not sufficiently understand the texts they were assigned. As predicted, there was a statistically significant increase in the self-reported empathizing in the fiction group but only for the participants who reported high emotional involvement in the reading. However, for this

participant group, a ' sleeper effect ' was observed: empathy increases appeared a week after the intervention, at T3, but were not found immediately after the reading. Among the fiction-group participants who reported low emotion transportation, a decrease in empathy was found.

So, is the idea that reading positively impacts empathy a pedagogical legend?

Recall that, according to the definition established above, pedagogical legends are beliefs about education, learning and development that have no scientific credibility at all, either because they are contradict a solid body of relevant research, because they are stated in language that lacks scientific traction, or because they represent a patent misunderstanding of reliable research. The idea that reading fiction favours the development of an empathic disposition does not fit any one of these descriptions. The evidence for the link between reading fiction and empathy is limited, but it can be seen as finding support in the published research just reviewed. Much could be said about limitations of this research, both from a methodological standpoint and in terms of its relevance to the particular Nussbaumian interpretation of the link between reading fiction and the strengthening of an empathic disposition on which this paper draws. In this section, I will restrict myself to commenting on what I take to be the most important ones before commenting briefly on the lessons educators can learn from this research and the educational questions that the research leaves open.

First, there is the mismatch between the experimentally contrived experiences of reading fiction and the level of exposure to fiction assumed in Nussbaum's account of the fiction-empathy link. As pointed out above, Nussbaum's idea is that it is regular, habitual fiction reading that is favourable to the development of the empathic disposition she identifies with compassionate citizenry. The operationalization of exposure to fiction in the research led by Mar (REFs), as well as that used in Avram and Aviram's (2009) study, are relatively strong in this regard. Stanovich and West's (1989) The Author Recognition Test, used by both studies is a validated, recognized proxy measure of reading frequency (Stainthorp, 1997). By contrast, the level of exposure to fiction in Shapiro, Morrison and Boker's (2004) study, which involved a mere four hours spend reading and discussing fiction over a two-month period, and in particular that in Bal and Veltkamp's research, which had participants read a single chapter of a book, is scarcely comparable to habitual fiction reading. Indeed, given just how little participants were exposed to fiction in both these studies, it is a wonder that any statistically significant impact on the empathy measures was observed at all. I would go so far as to say that the fact that it was just how potentially powerful the self-changing effect of literature can be.

There are also sampling problems, which afflicts the study by Avram and Aviram (2009) but particularly the research on medical education by Shapiro, Morrison and Boker (2004), which had only 22 participants. The generalizability of the latter study was further compounded by the fact that the participants were self-selected. The fact that the students volunteered to participate in the medical humanities program raises the possibility that the students who were attracted to the programme relatively more susceptible to having their sympathies affected by reading fiction than their peers who did not elect to participate. Also, a lack of demographic diversity in samples of all the research reviewed—except for Avram and Aviram's (2009) participants, participants were uniformly university students in their twenties on average—also limits the generalizability of the findings. Considered from the point of view of the interpretation of the fiction-empathy adopted for the purposes of this paper, however, this limitation is attenuated somewhat by the fact that Nussbaum's argument for the life-changing effects of literature focusses precisely on this age group.

Furthermore, the research evidence supporting the link between fiction and empathy affords few insights into a question that will be at the forefront of the minds of educators wishing to use the study of fiction as tool for moral and civic education: how to choose the books that will make the greatest impact on empathic development? Bal and Veltkamp's (2013) findings about the imaginative involvement in a work of fiction being key suggests that one important selection criterion is a work's ability to draw readers in imaginatively and transport them emotionally. In this connection, most educators will find Avram and Aviram's (2009) conclusion heartening. As we saw, only the quality of the books mothers read to their children—not maternal education level and not even reading frequency—correlated with children's dispositional empathy, a finding which is consistent with Nussbaum's intuitive account of the inherent power of recognized artistic merit to 'engage the personality at a deep level' (Nussbaum 2001, p. 433).

None of the research reviewed above, though, speaks to the further and very difficult issue of empathic bias an impediment to imaginative engagement with a work of fiction. One of the reasons Nussbaum and likeminded educators single out social realist novels as being particularly favourable to emergence of a sense of compassionate citizenry is because they invite readers into worlds that are foreign to readers' own personal experiences and, in this way, give readers an opportunity to see the meaning of aversive events and exploitative social relations from the point of view of those touched by them (Nussbaum, 2001, p. 426-431). Indeed, to stimulate such vicarious identification with co-citizen with whom the reader would otherwise have little meaningful social contact, Nussbaum encourages educators to select works that feature characters and events that readers are likely to have particular trouble empathizing with. Nussbaum's idea, it seems, is that imaginative draw of a great work of fiction will dissolve empathic bias, thus allowing natural and rational bonds of identification and sympathy to form between the reader and the groups the novels represent (see the discussion of this issue in Maxwell, 2006). But given what is known about the selective and partial nature of empathy (for an in-depth overview see, again, Bloom, 2015), we have reasons to be sceptical about Nussbaum's faith in the power of literature to overcome empathic bias. None of the research reviewed here investigated the educationally important question of how the content of a work of fiction might interface with readers' prior experiences and prejudices to facilitate or impede emotional transportation. I suspect that a closer look at the more extensive behavioural literature in social psychology on the effect of narrative framing on the capacity of fiction to bring about changes in ethical attitudes and stimulate other forms of 'social improvement' (for a partial review see Mar, Djikic, & Oatley, 2008) may be a valuable source of insights here. A review of these works is beyond the scope of this paper and will thus have to await another occasion.

In the meantime, considering the definition of 'pedagogical legend' advanced in this paper, the low epistemological criteria set out for distinguishing pedagogical legends from the multitude of partially supported beliefs about teaching, learning and development that inevitably inform educators' work, and the paper's successful search for empirical evidence that reading fiction is conducive to dispositional empathy, as limited as this evidence is, I think we can nevertheless assert with some confidence that fiction-empathy link is more than just another pedagogical legend.

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