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Reading Fictional Narratives to Improve Social and Moral Cognition: The Influence of Narrative Perspective, Transportation, and Identification

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There is a long tradition in philosophy and literary criticism of belief in the social and moral benefits of exposure to fiction, and recent empirical work has examined some of these claims. However, little of this research has addressed the textual features responsible for the hypothesized cognitive effects. We present two experiments examining whether readers' social and moral cognition are influenced by the *perspective* from which a narrative is told (voice and focalization), and whether potential effects of perspective are mediated by transportation into the story or by identification with the protagonist. Both experiments employed a between-subjects design in which participants read a short story, either in the first-person voice using internal focalization, third-person voice using internal focalization, or third-person voice using external focalization. Social and moral cognition was assessed using a battery of tasks. Experiment 1 (N = 258) failed to detect any effects of perspective or any mediating roles of transportation or identification. Implementing a more rigorous adaptation of the third-person story using external focalization, Experiment 2 (N = 262) largely replicated this pattern. Taken together, the evidence reported here suggests that perspective does not have a significant impact on the extent to which narratives modulate social and moral cognition, either directly or indirectly via transportation and identification.

Keywords: morality, focalization, perspective, identification, social cognition, fiction, narrative

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INTRODUCTION

Narrative fictions in various media and genres have long been regarded by humanistic scholars as educative, either through their embodiment of moral principles (Johnson, 1750) or their capacity to make us more sensitive to the needs and outlooks of others (Nussbaum, 1990; Nussbaum, 1995). Only very recently have such claims been subject to empirical test, where there has been a particular focus on the relation between narrative fiction and improvements in social cognition (overview: Dodell-Feder and Tamir, 2018). However, narrative fiction is a broad and heterogeneous category, raising the question of whether and why some texts might have more influence than others. In this paper we address this question by examining the role played by a specific textual feature, narrative perspective, on social and moral cognition.

Social cognition is defined as the perception, interpretation and use of social information, and comprises a set of abilities that we draw on daily to manage social relationships in a variety of situations (Fiske and Taylor, 2013). It includes affective empathy (i.e., tuning into other peoples' feelings or thoughts; Baron-Cohen and Wheelwright, 2004; Singer and Klimecki, 2014), Theory of Mind (ToM; understanding others' mental states; Wellman et al., 2001), and emotion recognition (i.e., the perception of others' emotional states; Brühne, 2005; Frith and Frith, 1999). The promotion of social cognition seems crucial not only in view of empirical evidence that understanding others facilitates everyday social interactions (e.g., Watson et al., 1999; Leppänen and Hietanen, 2001; Findlay et al., 2006), but also in light of evidence suggesting that deficits in both affective empathy and ToM are associated with mental health disorders, such as autism spectrum disorder (Baron-Cohen, 2000; Hobson, 2007) and schizophrenia (Lee, 2007; Bora et al., 2009). Furthermore, the cultivation of affective empathy and ToM are often regarded as essential for moral education (Dolby, 2012; Nussbaum, 1995; for a contrary view see Bialystok and Kukar, 2018). In recent years, researchers have become increasingly interested in testing whether social and moral cognition can be improved by reading fictional narratives (Calarco et al., 2017). In this paper we address this question, but we go further by testing whether effects on social and moral cognition are modulated by the narrative perspective in a fictional story.

Many empirical researchers favor the idea that reading narratives is associated with enhanced social cognition. Several lines of thought make that a plausible view. Stories are typically about characters and their social interactions; hence readers must apply their social cognition, including affective empathy and ToM, in order to understand narratives (e.g., Calarco et al., 2017; Salem et al., 2017; Deane et al., 2019; Mar, 2018a; Mar, 2018b). Furthermore, the social content of (fictional) narratives frequently broadens the scope of social information individuals are exposed to by describing experiences they would not have in real life, or by presenting events from novel perspectives (Calarco et al., 2017). In addition written narratives provide a safe environment to practice social cognition since, unlike in real life, readers can re-read passages several times in order to make sense of social situations, and misunderstandings do not result in adverse consequences for the reader or anyone else (Mar and Oatley, 2008). Tentative support for the proposal that reading stories promotes social cognition comes from two meta-analyses that have summarized effects of reading short fictional narratives on social cognition (Dodell-Feder and Tamir, 2018) and associations of lifetime exposure to fictional narratives with social cognition (Mumper and Gerrig, 2017). However, the aggregate effect sizes reported in both meta-analyses are small, with some experiments failing to detect any effects of reading short fictional stories at all (e.g., Panero et al., 2016; Samur et al., 2018). This inconsistent pattern of findings might be explained by the fact that different studies focus on different categories of text (e.g., fiction *vs* nonfiction, or literary *vs* popular fiction) and/or psychological mechanisms (e.g., transportation, imagery generation) presumed to be responsible for effects on social cognition (Deane et al., 2019). Texts in different categories differ along multiple dimensions, leaving it unclear which features might be responsible for any effects; and psychological mechanisms may also be triggered by a variety of text characteristics. To find out whether and why certain fictional narratives enhance social cognition, a targeted investigation of text features and their relationship to psychological mechanisms is needed.

Two psychological mechanisms that have been proposed to underlie narrative-based social cognitive benefits are identification and transportation (see Consoli, 2018). Identification refers to the process of taking a character's perspective in light of that character's beliefs, values, and goals (Van Krieken et al., 2017). Transportation[1] is "the experience of being imaginatively carried away into the story world" (Gerrig, 1993, as cited in Deane et al., 2019). Although transportation and identification are empirically distinguishable concepts (Tal-Or and Cohen, 2010; Tal-Or and Cohen, 2016), the processes seem to work synergistically, so that transportation facilitates identification and vice versa (Calarco et al., 2017). In particular, transportation is thought to reduce the psychological distance between readers and story characters, which in turn facilitates the reader's ability to take the character's perspective, share their emotions, and understand their (inter-)actions (Calarco et al., 2017; Consoli, 2018). Both identification and transportation appear to enhance social cognition. Identification is itself an exercise of mentalizing/ToM, while empirical evidence has supported a link between transportation into a narrative and enhanced social cognition beyond the story world (Johnson, 2012; Johnson, 2013; Bal and Veltkamp, 2013; Walkington et al., 2019). Therefore, we have good reason to think that transportation and identification mediate the relationship between reading narratives and social cognition.

Transportation and identification are themselves mediated, at least in part, by features of the text. Previous work that has focused on the role of textual determinants has highlighted the importance of "privileged access to the perceptions, evaluations, and goals of a character" as a central mechanism through which readers are transported into the protagonists' world and identify themselves with characters (van Krieken et al., 2017, p.4). Writers can vary this level of access by altering the perspective or point of view from which a narrative is told (van Krieken, 2018). Narrative perspective is a multi-dimensional construct (cf. Hühn et al., 2009). Two dimensions are especially relevant to how the inner life of a character is presented; Genette, 1980 called these *voice* and *focalization*. Voice concerns who tells the story, which in most narratives will be a first-person narrator or a third-person narrator, and is typically reflected in the grammatical use of certain pronouns. Focalization concerns the perspective or point of view of the narrator and specifies restrictions on access to information. For instance, when a story is narrated in the first person by a particular character, the narration is often restricted to what the character knows, including their thoughts and feelings. However, narrative voice and focalization are independent. Third-person narrators may tell a story from an unrestricted ("omniscient") point of view, with broad access; or a more restricted perspective, either through what Genette called *internal focalization* (where the narrator has access to what a particular character knows and experiences) or *external focalization* (where the narrator does not have access to the character's thoughts or experiences). The following passages, both in third-person voice, illustrate the

[1]Some researchers (e.g., Calarco et al., 2017) use the term absorption synonymously.

distinction between internal focalization (1) and external focalization (2):

(1) Sarah looked at her daughter. She knew she had been like this as a child, sometimes. But why did Amy *always* have to act this way? Couldn't she see how much it hurt?
(2) Sarah looked at her daughter. She frowned, and said, "I was like you sometimes when I was a child. But why do you *always* have to act this way? Can't you see how much it hurts?"

In (1), readers have direct access to the mental life of the protagonist (Sarah), whereas in (2) the scene is described from the point of view of an external observer without direct access to Sarah's mental life. Because focalization is what determines the extent to which the narrator offers insight into a character's inner life, it appears more relevant to transportation and identification than voice.

Although Genette's distinction between narrative voice and focalization has initiated an animated discussion among narratologists (see e.g., Fludernik, 2001; Margolin, 2009; Currie 2010), empirical investigations have almost exclusively studied manipulations of voice, assuming that this is sufficient for testing perspective (e.g., Van Lissa et al., 2016; Hartung et al., 2017b; Creer et al., 2019; Kim et al., 2019; Samur et al., 2020). So far, only one empirical study has investigated the effects of focalization or perspective as distinct from voice. Salem et al. (2017) compared first-person narration (internally focalized); third-person external focalization; and two forms of third-person internal focalization: psycho-narration, in which the narrator reports the thoughts of the protagonist (e.g., "She worried about her children"), and free indirect discourse (FID), which stays closer to the protagonist's subjectivity (e.g., "What would happen to her children?"). (Example (1) above contains both.). Results indicated that focalization had effects on perspective-taking independently of narrative voice, suggesting that focalization is indeed more important for processes relevant to identification and, hence, possibly social cognition in the real world.

However, targeted investigations are needed that manipulate voice and focalization separately and assess both proximal effects, i.e., processes of transportation and identification with characters, and distal outcomes, i.e., general social cognition. In sum, (internal vs. external) focalization is thought to exert a greater influence on transportation and identification than (first- *vs* third-person) voice. As a consequence of this influence, internally focalized narratives are expected to lead to greater benefits for social cognition than externally focalized narratives, regardless of narrative voice.[2]

A related question is whether manipulations of perspective might have an effect on moral cognition. Theorists in the humanities have traditionally argued that reading (fictional) stories has the capacity to generate moral improvement (e.g., Nussbaum, 1990; Nussbaum, 1995), but there is a paucity of experimental evidence to support this claim. The few existing investigations (Johnson et al., 2013; Koopman, 2015; Kidd and Castano, 2019) provide somewhat suggestive findings; however none of them has examined the ways in which textual features might influence moral cognition. Reading narratives might be assumed to benefit moral cognition via at least two routes.

The first route is via an increase of social cognition, as outlined above (Koopman, 2015). Nussbaum (2001) suggests that "tragic fictions promote extension of concern by linking the imagination powerfully to the adventures of the distant life in question" (p. 352). The idea is that through empathetic sharing of characters' mental states, readers enlarge their capacity for imaginative contact with the thoughts, feelings and intentions of others in real-life. This may have multiple effects: increasing readers' compassion, being more aware of the impact of their own actions on others' welfare, and, by providing them with better information about motives and intentions, allowing them to make better, more sophisticated moral judgements about the actions of others (Killen et al., 2011; Ugazio et al., 2014). Insofar as moral cognition is assumed to improve as a result of narrative-based improvements in social cognition, which are expected to rely on internal (*vs* external) focalization, internal focalization should also generate improvements in moral cognition. It is, however, agreed that improving social-cognitive abilities does not automatically lead to morally better outcomes; while empathy is often associated with prosocial virtues, it can be used for manipulation and deception (e.g. Bloom, 2017; Breithaupt, 2018; Bubandt and Willerslev, 2015; Vermeule, 2010; see also Sutton et al., 1999). Therefore, improvement of social cognition cannot be considered a sufficient condition of moral improvement – enhanced social cognition does not guarantee moral progress. Yet it may be that readers who are appropriately motivated can utilize the social knowledge gained from narratives to become morally better people. If so, the effect is expected to be modulated by focalization.

The second route is more direct, via observational learning (Johnson et al., 2013; Mumper and Gerrig, 2019; Black and Barnes, 2020a). According to this view, readers can learn morally positive attitudes and behaviors when a story character is rewarded for a morally positive action or punished for a morally negative action; and identification with the character can increase the likelihood of executing an observed behavior. Since identification is thought to depend on internal (*vs*. external) focalization, this is another way in which manipulating focalization can generate changes in moral cognition. If readers internalize such pattern of reward blindly, however, without gaining insight into universal principles of ethical conduct, they could be equally likely to learn morally negative attitudes and behaviors when a story character is rewarded for a morally

[2]Whilst we predict that the more direct access to characters' inner life bestowed by the internal perspective facilitates transportation, identification, and ultimately social cognition, other researchers have assumed that having additional information about mental states reduces (or does at least not enhance) readers' understanding of those states. However, these studies have focused on explicit information provided by a narrator. For instance, Kotovych et al., 2011 observed support for their hypothesis that character transparency, that is, the extent to which the character's actions and attitudes are clear and understandable, is reduced when information about a character is explicitly stated compared to when readers must infer such details. Furthermore, results of Peskin and Astington (2004) suggest that social cognitive abilities are promoted if readers have to work out the mental lives of fictional characters themselves, compared to when mental states are spelled out for the readers.

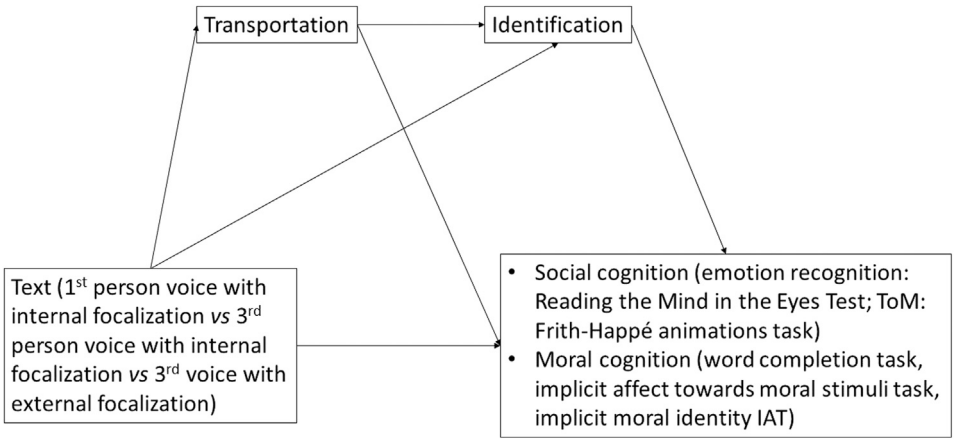

FIGURE 1 | Predicted relationships between the variables of interest and their operationalization.

negative action or punished for a morally positive action. Reading narratives would therefore lead to a "moral boundary erosion" (Black and Barnes, 2020a). Yet there is some reason to believe that reading narratives operates as a "moral laboratory" (Hakemulder, 2000), leading to increased moral sensitivity rather than the opposite. Typically, readers prefer narratives in which good behavior is presented as preferable to bad behavior (Raney, 2004). Also, readers have been found to report an inability to imaginatively engage with immoral fictional worlds, a phenomenon known as "imaginative resistance" (overview: Black and Barnes, 2020b). In another study by Vezzali et al. (2015), reading a passage from *Harry Potter* about prejudice improved attitudes toward immigrants for those who identified with Harry Potter, whereas there was no effect for those who identified more with Voldemort, the villain; this suggests that identification is more likely to improve than impair moral cognition. For these reasons, reading internally (*vs.* externally) focalized narratives is expected to lead not only to greater improvements in social cognition, but also in moral cognition, in both cases via increases of transportation and identification.

Here we report two experiments that investigated whether social and moral cognition are affected by the perspective from which a fictional narrative is told. We considered both voice (first- *vs* third-person) and point of view (internal *vs*. external focalization). We also looked at potential mediating effects of transportation into the story world and identification with the protagonist. In Experiment 1, we employed a between-subjects design in which participants read a complete short story by an established author either in its original version, i.e., a third-person narrative using internal focalization (specifically, FID); an adapted version telling the narrative in first-person voice using internal focalization; or an adapted version telling the narrative in third-person voice using external focalization, as pre-registered in the Open Science Framework. Social cognition was assessed in terms of emotion recognition, as indicated by the Reading the Mind in the Eyes Test-Revised (Baron-Cohen et al., 2001), and ToM, as indicated by the Frith-Happé animations task (Abell et al., 2000). Two basic self-concepts that have been associated with moral behavior are, respectively, communion and agency (Bakan, 1966). Communion is associated with allocentric behaviors, since it is related to cultivating social relationships and pro-social traits including cooperation, while agency is associated with egocentric behaviors, since it is linked with distancing the self from others and anti-social traits including assertiveness (Bakan, 1966; Bartz and Lydon, 2004). We assessed these two self-concepts implicitly using a word-fragment completion task, which indicated ease of access to the respective concepts (Bartz and Lydon, 2004). In addition, the Immediate Affect towards Moral Stimuli task reflected participants' affective reactions towards morally positive/negative stimuli, which have been associated with guilt feelings in a moral dilemma, and with emotional reactions to/rejection of an unfair offer (Hofmann and Baumert, 2010). Finally, an Implicit Association Test (IAT) measured participants' moral *vs.* immoral self-concept, which predicts moral actions such as honest behavior despite negative consequences (Perugini and Leone, 2009).

Experiment 2 used the same basic design and internal focalization text versions as Experiment 1, but the version with external focalization was edited even further to strengthen the focalization manipulation. **Figure 1** provides a schematic representation of the predicted relationships between the variables of interest and how these were operationalized. Note that although transportation and identification likely influence each other, the interrelation between the two variables is not at the core of the research questions addressed here, and thus we did not make specific hypotheses about how a combination of transportation and identification might mediate the relationship

TABLE 1 | Overview and justification of dependent variables, their operationalization, and their use in previous experiments on narrative-based benefits for social and moral cognition.

Outcome		Justification for investigating outcome	Operationalization	Justification for using operationalization	Use of operationalization in previous investigations in the field
Social cognition	Emotion recognition	Mar (2018a) predicts that stories containing accurate social content can teach lessons about human psychology including emotional expression	Reading the Mind in the Eyes Test (RMET; Baron-Cohen et al. (2001))	• Oakley et al. (2016) suggested that the RMET measures emotion recognition • This task has been applied widely in previous research, which facilitates comparison with existing findings	Yes e.g., Djikic et al. (2013), Kidd and Castano (2013), Kidd and Castano (2019), Black and Barnes (2015), Liu and Want (2015), Kidd et al. (2016), Panero et al. (2016), and Samur et al. (2018)
	Theory of Mind (ToM)	Mar (2018a) suggests that stories that provide access to protagonists' inner life exercises ToM	Frith-Happé animations task by White et al. (2011)	• This task draws on people's tendency to attribute human psychology to silent moving shapes • This task has been used as a reliable measure of ToM in adults (White et al. (2011)): High levels of ToM are suggested if participants correctly recognize mental interactions between animated shapes	No
Moral cognition		Theorists in the humanities have traditionally argued that reading (fictional) stories has the capacity to generate global moral improvement across a range of components of moral cognition (e.g., Nussbaum (1990), Nussbaum (1995))	Word completion task introduced by Bartz and Lydon (2004)	• This task provides an implicit way of assessing moral cognition that reduces susceptibility to social desirability • It indicates the ease of access to morally relevant concepts (Bartz and Lydon (2004)), namely communion (related to cultivating social relationships and pro-social traits) and agency (linked with distancing the self from others and anti-social traits)	No
			Implicit affect towards moral stimuli task (IAMS task; Hofmann and Baumert (2010))	• This task reflects affective reactions towards morally positive/negative stimuli • Performance in this task has been associated with guilt feelings in a moral dilemma, and with emotional reactions to/rejection of an unfair offer (Hofmann and Baumert (2010))	No
			Implicit moral identity IAT	• This task measures moral *vs.* immoral self-concept • Performance in this task predicts moral actions such as honest behavior despite negative consequences (Perugini and Leone (2009)) • This task has proven to be a better predictor of real-life action than measures of explicit attitudes (Perugini and Leone (2009))	No

between text reading and social/moral cognition. **Table 1** presents an overview and justification of dependent variables, their operationalization, and their use in previous experiments on narrative-based benefits for social and moral cognition.

The following hypotheses were tested in both experiments:

(1) Measures of social and moral cognition would be higher after reading a narrative told through internal focalization than external focalization.
(2) The voice (first- *vs*. third-person) in which a narrative is told would not *per se* influence social cognition. Therefore, social cognition would not differ after reading narratives told in different voices as long as focalization was held constant between stories.
(3) Reading narratives achieves benefits in social and moral cognition via transportation into the narrative and identification with characters. Thus, we expected effects of story reading on social and moral cognition to be mediated by transportation and identification with the story's protagonist.

EXPERIMENT 1

Materials and Methods

All methodological procedures were approved by the Research Ethics Committee of the School of Psychology at the University of Kent, United Kingdom, prior to commencement, and pre-registered on the Open Science Framework, https://osf.io/wpd2c. The experiment followed a between-subjects design involving one randomized factor with three levels of text (first-person voice with internal focalization *vs* third-person voice with internal focalization *vs* third-person voice with external focalization). First-person voice with external focalization was not realized since this would have required an unacceptable level of distortion to the original story, either by removing the content referring to the protagonist's mental life altogether, which would have made this story version much shorter than the remaining versions, or by replacing this type of content with something else, which again would have substantially reduced comparability with the three other story versions. Furthermore, narratives using first-person voice with external focalization can occur, but are extremely rare (Genette, 1983; Edmiston, 1989); thus, this textual condition does not seem of high practical relevance and would likely have come across as artificial to readers.

Participants

Participants were recruited through Prolific Academic and were paid £6.00. All participants had English as their primary language, and provided written informed consent before data collection. We used the software program G*Power to conduct an a-priori power analysis, aiming for 0.95 power to detect a medium effect size of f = 0.25 at the standard 0.05 alpha error probability. This resulted in a total *N* of 251. Allowing for a dropout rate of approx. 33% (as observed in previous studies, e.g., Kidd and Castano, 2019), we

aimed to recruit a total *N* of 340 to yield the target of *N* = 252 (84 per group). Power analysis further showed that a total sample size of *N* = 252 would have a power of 0.99 to detect mediation, given a medium size effect and 5% significance level. This sample size would have a power of 0.61 to detect a small effect.

Participants were excluded from analyses if they met at least one of the following criteria: 1) First language was not English; 2) reading time was below 360s[3]; 3) failed a check of text comprehension by indicating that the story was told by an anonymous narrator after reading the internal first-person version of the story, OR that the story was told by the mother, Marjorie (the protagonist) after reading the external third-person version of the story; 4) more than two mock authors were selected in the Author Recognition Test–Genres (Mar and Rain, 2015; cf. Wimmer et al., submitted)[4]; 5) failed an attention check item that was interspersed within a questionnaire (Transportation Scale; Green and Brock, 2000).

The target sample was reached after 347 volunteers. When exclusion criteria were applied, 258 participants remained in the final sample, 87 of whom had read the first-person narrative with internal focalization (54.0% female, mean age = 36.55, SD of age = 14.01), 87 of whom had read the third-person narrative with internal focalization (52.9% female, mean age = 33.69, SD of age = 10.41), and 84 of whom had read the third-person narrative with external focalization (56.0% female, mean age = 35.00, SD of age = 12.16). See **Figure 2** for a schematic of the flow of participants through the experiment.

Reading Stimuli

Three versions of Rose Tremain's "The Closing Door", a complete short story about a widow seeing off her 10-year-old daughter to boarding school, served as reading stimuli. This text was chosen for several reasons. First, its length, i.e., approximately 3000 words, was considered both long enough to evoke the effects under investigation and short enough to be read in its entirety during an experimental session. Second, the story is by a prize-winning literary author in a highly regarded collection, and previous research has suggested that literary stories might be especially good at affecting social cognition (Kidd and Castano, 2013). Third, it describes both 'outer events' (physical happenings) and 'inner views' (how the events are perceived by the protagonist), so that the content was amenable to manipulations of voice and focalization. In contrast, manipulating the voice and focalization of stories dealing exclusively with outer events would probably have a low impact on the reader, while changing a story about the inner life of a character to external focalization would obliterate the vast majority of the content. Finally, we anticipated that the farewell theme of the story was relatively familiar to all participants, meaning that they would in principle be able to identify with the protagonist, even if inter-individual variation was expected.

The original story represented the third-person narrative with internal focalization (FID). In addition to that, two adaptations were created by SF. In one version, the story is told by the protagonist in the first person with internal focalization. In the other version, the story is told by an anonymous third-person narrator using external focalization. Word count was comparable across the three versions of the story (first-person narrative with internal focalization: 3127 words; third-person narrative with internal focalization: 3058 words; third-person narrative with external focalization: 2962 words). **Table 2** exemplifies the use of perspective and focalization in the three texts; full stimuli are available on the pre-registration pages, https://osf.io/wpd2c.

Assessment Tasks

Lifetime Exposure to Print

The Author Recognition Test–Genres (Mar and Rain, 2015) provided an indicator of reading habits. Participants were asked to accurately recognize the names of 110 fiction and 50 non-fiction authors (targets) among names of 40 non-authors (foils). A fiction sub-score was calculated based on the number of correctly identified fiction authors (possible range: 0–110).

Trait Empathy

In the Empathy Quotient (Baron-Cohen and Wheelwright, 2004), 40-item version, respondents are asked to indicate the degree to which they agree with statements, such as "I can easily tell if someone else wants to enter a conversation", using a 4-point rating scale that ranges from strongly disagree to strongly agree. A sum score was calculated for each respondent, and higher scores indicating greater levels of empathy (possible range: 0–80). Internal consistency in the current sample was Cronbach's $\alpha = 0.91$.

Identification

Participants' identification with the protagonist was assessed using a scale adapted from Cohen (2001) that consisted of the following items, which were rated on a 7-point Likert scale ranging from strongly disagree to strongly agree, and used to calculate a sum score (possible range: 8–56):

- I was able to understand the events in the story in a manner similar to that in which the mother, Marjorie[5], understood them.
- I think I have a good understanding of the mother.

[3]The reading time cut-off was based on an average word reading speed of 239 ms, reported by Benjamin and Gaab (2012). This yields an average reading duration of 731 s for each text excerpt. Thus, the cut-off of 360 s is just below half of the time an average reader would need to read the text. This criterion has previously been applied by Wimmer, Currie, Friend, and Ferguson (submitted).

[4]Using guesses within Author Recognition Tests as an exclusion criterion is a common strategy in the field (cf. Kidd and Castano, 2013; Kidd and Castano, 2019; Kidd et al., 2016; Panero et al., 2016; Samur et al., 2018) as it can indicate a rather negligent participation style. Excluding participants with more than two guesses is more rigorous than measures applied in previous experiments (e.g., Kidd and Castano, 2019) since Moore and Gordon (2015) suggested a higher penalty for selecting mock authors than originally recommended. Six out of 270 participants (2.22%) were excluded due to this criterion (cf. **Figure 2**).

[5]The character's name, Marjorie, was mentioned in the first item only to ensure that respondents associated "the mother" with this character.

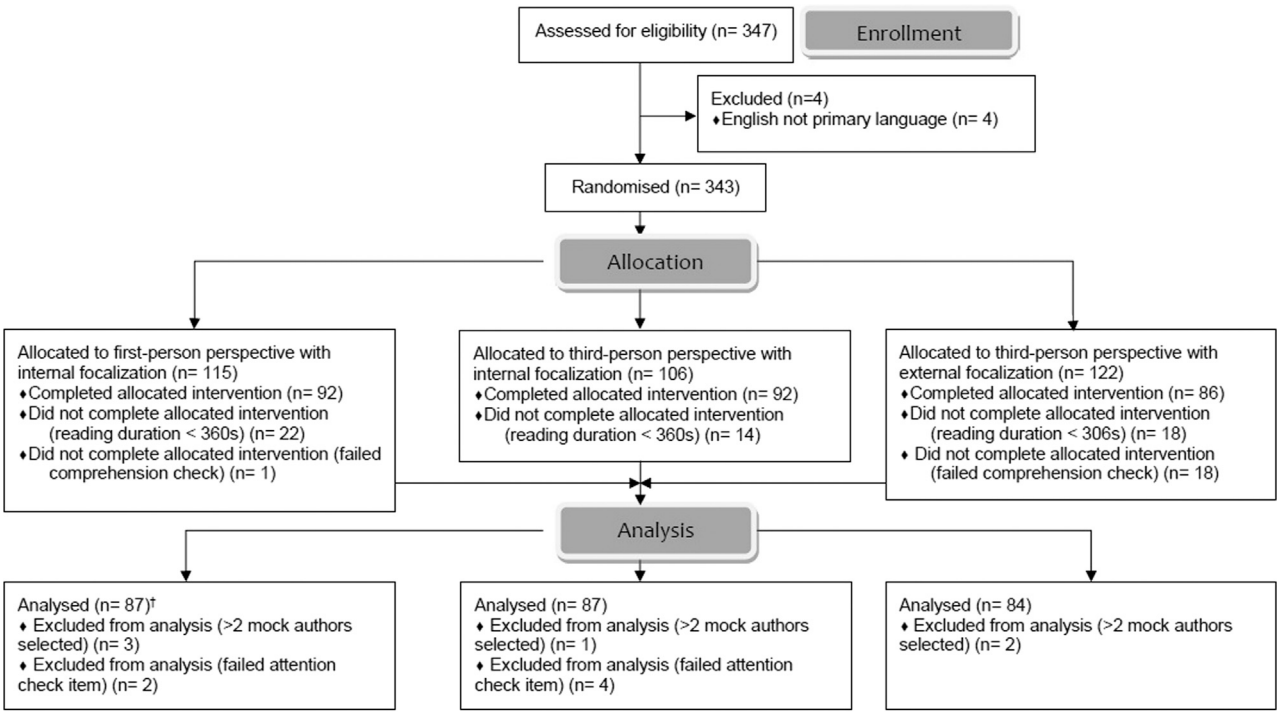

FIGURE 2 | Flow of participants through Experiment 1.

- I tend to understand the reasons why the mother did what she did.
- While reading the story, I could feel the emotions the mother portrayed.
- During reading, I felt I could really get inside the mother's head.
- At key moments in the story, I felt I knew exactly what the mother was going through.
- During reading, I wanted the mother to succeed in managing her emotions.
- When the mother succeeded I felt joy, but when she failed, I was sad.

In the present sample, internal consistency of this scale was Cronbach's $\alpha = 0.87$.

TABLE 2 | Excerpts of text stimuli of Experiment 1.

First-person narrative, internal focalization	third-person narrative, internal focalization	third-person narrative, external focalization
And it was coming nearer, nearer, the moment when I would have to unwind Patience's arms from round my waist and lead her forwards to the barrier. I tried to stand a bit more upright, but the weight of Patience clinging to me was implacable, as though I had been roped to the ground. And I thought, I am bent like an old person, bent down by the gravity of love [..]. I knew that this now risked to become what Tim would have called 'a scene', and that the other parents would pity me, or even despise me, for not crushing it the minute it started, so, with a strength that surprised me, I grabbed Patience by the fist that had struck me and turned her round to face the trains and the great vaulted station roof above them, still black from the years of war.	And it was coming nearer, nearer, the moment when Marjorie would have to unwind Patience's arms from round her waist and lead her forwards to the barrier. She tried to stand a bit more upright, but the weight of Patience clinging to her was implacable, as though she had been roped to the ground. And she thought, I am bent like an old person, bent down by the gravity of love [..]. Marjorie knew that this now risked to become what Tim would have called 'a scene', and that the other parents would pity her, or even despise her, for not crushing it the minute it started, so, with surprising strength, she grabbed Patience by the fist that had struck her and turned the sobbing child round to face the trains and the great vaulted station roof above them, still black from the years of war.	And the moment was coming nearer when Marjorie would have to find a way to unwind Patience's arms from round her waist and lead her forwards to the barrier. Marjorie was making a visible effort to stand a bit more upright, but the weight of Patience clinging to her seemed to make this impossible, pulling her back to the ground. She was bent like an old person, intensifying her air of misery [..]. This now risked to become 'a scene'. It is common knowledge that any mother or father who failed to crush a scene the minute it started would be pitied, or even despised, by other parents. Perhaps Marjorie understood this, because suddenly and with surprising strength, she grabbed Patience by the fist that had struck her and turned the sobbing child round to face the trains and the great vaulted station roof above them, still black from the years of war.

Familiarity with Subject Matter

Previous experience with the subject matter of the stories was assessed using the following items:

- Reflecting on your own life experiences, how familiar were the events in the story to you? (7-point rating scale ranging from *very unfamiliar* to *very familiar*)[6]
- Have you ever attended boarding school?
- Has anyone in your family attended boarding school? (if so, who?)
- As a child were you ever sent away from your family for a long period of time?
- Are you a parent? (if so, do you have a partner or single?)
- Have you ever experienced a separation from a loved one? (if yes, please explain)

Transportation

Transportation was operationalized using the 12-item scale developed by Green and Brock (2000). High levels of transportation are indicated by a high sum score (possible range: 12–84). In the present sample internal consistency was Cronbach's $\alpha = 0.73$.

Emotion Recognition

We measured emotion recognition using the Reading the Mind in the Eyes Test-Revised (Baron-Cohen et al., 2001). Better emotion recognition skills were indexed by a high relative frequency of correct responses (possible range: 0–1). Although the Reading the Mind in the Eyes Test-Revised was initially introduced as a measure of mentalizing, more recently it has been proposed that it may rather reflect emotion recognition (Oakley et al., 2016), which is the operationalization we adopt in the present experiment.

Implicit Morality

First, a word completion task (Bartz and Lydon, 2004) assessed self-concepts in terms of agency and communion. Six out of 13 word fragments (e.g., _ _ _ erior) could be completed with agency words (e.g., 'superior') or non-agency words (e.g., 'interior') and six word fragments (e.g., _ind) could be completed with communion words (e.g., 'kind') or non-communion words (e.g., 'mind'); one word fragment could be completed with either an agency or communion or non-agency-non-communion word, i.e., c_ _ p_ _ _ tive ('competitive', 'cooperative', 'comparative'). Responses were coded as either a "hit" or a "miss" for the target word. An agency score (possible range: 0–7) was calculated by summing the hits to the target words: superior, confident, active, competitive, boast, greedy, and hostile. A communion score (possible range: 0–7) was computed by summing the hits to target words: kind, warm, gentle, cooperative, whiny, nag, and dependent. Higher implicit morality is indicated by a low agency and a high communion score, respectively.

Second, in the Implicit Affect towards Moral Stimuli task, we followed the experimental procedure and stimuli applied by Hofmann and Baumert (2010). In each trial, participants were asked to categorize a Chinese pictograph as "pleasant" or "unpleasant" using two response keys on the keyboard. Shortly before the Chinese pictograph was presented, a moral prime (e.g., an elderly couple walking arm-in-arm, or a man directing a gun into the camera), or control picture (e.g., a lightening striking a mountain side) appeared for 100 ms. It is assumed that the affective reaction to the moral primes presented is misattributed to the Chinese pictograph, thus influencing the response. We used ten pictures of morally positive behaviors and ten pictures of morally negative behaviors as moral primes. As comparison pictures, we included ten non-moral pictures of positive valence, as well as ten non-moral pictures of negative valence. Following the procedures of Hofmann and Baumert (2010), responses exceeding a threshold of 2000 ms (3.28% of all responses) or falling below 350 ms (6.07% of all responses) were considered outliers and excluded from analyses. To achieve an indicator of immediate affect towards moral stimuli, the individual difference index of the Implicit Affect towards Moral Stimuli (possible range: 0–1) was calculated for each participant (cf. Hofmann and Baumert, 2010; proportion of "positive" judgements on trials in which a Chinese pictograph was preceded by a positive moral prime *minus* percentage of "positive" judgements on trials in which a Chinese character was preceded by a negative moral prime). To control for general, morally unrelated affect, the individual differences index of the IACS (immediate affect towards control stimuli) was computed (i.e., proportion of "positive" judgements on trials with positive morality-irrelevant primes *minus* the proportion of "positive" judgments on trials with negative morality-irrelevant primes; possible range: 0-1).

Third, we applied an Implicit Association Test (IAT) of implicit moral identity (implicit moral identity IAT), replicating the experimental procedure and stimuli in Perugini and Leone (2009), and following the standard IAT sequence (Greenwald et al., 1998). The target categories were "Moral" (represented by the stimulus words honest, sincere, faithful, modest, altruist) *vs* "Immoral" (represented by the stimulus words deceptive, arrogant, dishonest, cheater, pretentious), and the paired categories were "Me" (represented by the stimulus words I, me, myself, self, my) *vs* "Others" (represented by the stimulus words them, they, others, your, you). As in Perugini and Leone (2009), implicit moral identity was indexed by the D6 measure (Greenwald et al., 2003), which is calculated as the mean latency in the "immoral-me" block *minus* the mean latency in the "moral-me" block, divided by the individual standard deviation of latencies across "immoral-me" and "moral-me" blocks. Responses with latencies below 400 ms or above 10,000 ms were excluded from analysis, and latencies of errors were replaced by the block mean of correct-response latencies plus 600 ms. Higher scores express a stronger implicit moral self-concept (possible range: -2-2).

Theory of Mind

A revised version of the Frith-Happé animations task (White et al., 2011) was used as an indicator of ToM. Participants

[6]The 6-item battery was used for exploratory purposes; however only the first item was included in statistical analyses, so that the possible range for the familiarity score was 1–7.

TABLE 3 | Experiment 1: Descriptive statistics for each dependent measure in each experimental group, and ANCOVA results for the main effect of text.

Dependent measure		First-person narrative with internal focalization		third-person narrative with internal focalization		third-person narrative with external focalization		ANCOVA: main effect of text			
		n	*M (SD)*	*n*	*M (SD)*	*n*	*M (SD)*	df	*F value*	*p value*	η^2_p
Word completion task	Agency score (possible range: 0–7)	86	3.28 (1.27)	85	3.25 (1.25)	80	3.33 (1.24)	2, 245	0.13	0.879	0.001
	Communion score (possible range: 0–7)	86	1.67 (1.24)	85	2.09 (1.49)	80	1.86 (1.27)	2, 245	2.22	0.111	0.018
Frith-Happé animations task	MCQ 1: Accuracy sum score (possible range: 0–4)	86	2.01 (1.09)	85	1.89 (1.06)	80	1.95 (1.07)	2, 245	0.33	0.720	0.003
	MCQ 2: Accuracy sum score (possible range: 0–8)	78	3.17 (1.88)	76	2.97 (1.87)	74	2.96 (1.70)	2, 222	0.22	0.800	0.002
RMET: Relative frequency of correct responses (possible range: 0–1)		85	0.70 (0.14)	85	0.70 (0.17)	79	0.70 (0.15)	2, 243	0.00	0.997	0.000
Implicit affect towards moral stimuli score (possible range: 0–1)		72	0.13 (0.20)	73	0.14 (0.21)	70	0.18 (0.25)	2, 208	0.00	0.998	0.000
Implicit moral identity IAT: D6 (possible range: -2-2)		70	0.66 (0.35)	73	0.70 (0.35)	70	0.71 (0.30)	2, 207	0.28	0.755	0.003
Transportation Scale (possible range: 12–84)		86	58.13 (8.76)	85	56.34 (9.23)	80	56.59 (9.40)	2, 245	1.69	0.188	0.014
Identification Scale (possible range: 8–56)		86	46.56 (6.65)	85	45.35 (7.23)	80	44.89 (7.35)	2, 245	2.08	0.127	0.017
Author Recognition Test – Genres: Fiction sub score (possible range: 0–110)		87	17.94 (16.18)	87	16.33 (15.85)	84	16.44 (15.90)				
Empathy Quotient (possible range: 0–80)		87	39.11 (15.04)	87	41.13 (12.46)	84	39.92 (12.87)				

Note. *MCQ, multiple choice question; RMET, reading the mind in the eyes test–revised; IAT, implicit association test.*

watched four video clips depicting animated triangles and interpreted the interactions between these shapes. Before presentation of the clips, participants were told that each video would contain either: *no interaction*, defined as no obvious interaction between the triangles, with movement appearing random; or *physical interaction*, defined as 'interaction between the triangles in which actions are directed toward each other in order to achieve specific goals'; or *mental interaction*, defined as 'an interaction between the triangles involving the manipulation of the emotions and thoughts of one triangle by the other'. Immediately after watching each video, participants categorized the type of interaction as either no interaction, physical interaction, or mental interaction by responding to a multiple choice question. Choosing "mental interaction" was coded "1", the remaining choices were coded "0", so that the sum score integrating responses to all four video clips had a potential range of 0 to 4. When mental interaction was chosen correctly, two further multiple-choice questions probed details about the feelings of each of the shapes, with one out of five response options being correct. Correct answers were coded "1", errors were coded "0", resulting in a four-video sum score with a possible range of 0 to 8.

Procedure

Participants completed all tasks on a computer, starting with a Qualtrics survey. After giving their informed consent to participate, respondents completed the Author Recognition Test–Genres and the Empathy Quotient. Next, participants were randomly allocated to one of the three reading conditions (first-person voice with internal focalization *vs* third-person voice with internal focalization *vs* third-person voice with external focalization). Immediately after reading, participants answered a comprehension question, "Who do you think is narrating the story you just read?", by selecting one of four response options: the mother (Marjorie); an anonymous narrator; other (please state); don't know/do not wish to answer. Subsequently, participants completed the Identification and Transportation Scales as well as the familiarity items. Next, they performed the word completion task, Frith-Happé animations task, and Reading the Mind in the Eyes Test-Revised. They were then redirected to the Inquisit platform to complete the Implicit Affect towards Moral Stimuli task and implicit moral identity IAT. In contrast to Qualtrics, Inquisit enables measurement of reaction times on millisecond level (De Clercq et al., 2003). Finally, participants were redirected to a Qualtrics survey to receive written debriefing. The entire experiment took 70 min to complete, on average.

Data Analysis

All analyses were pre-registered, and the full datasets are available on the Open Science Framework web pages, https://osf.io/6gsqn/.

We adopted the standard significance level of $p < .05$ for all inferential tests. Each task was analyzed separately, with ANCOVAs that include text (first-person internal *vs* third-person internal *vs* third-person external) as between-subjects

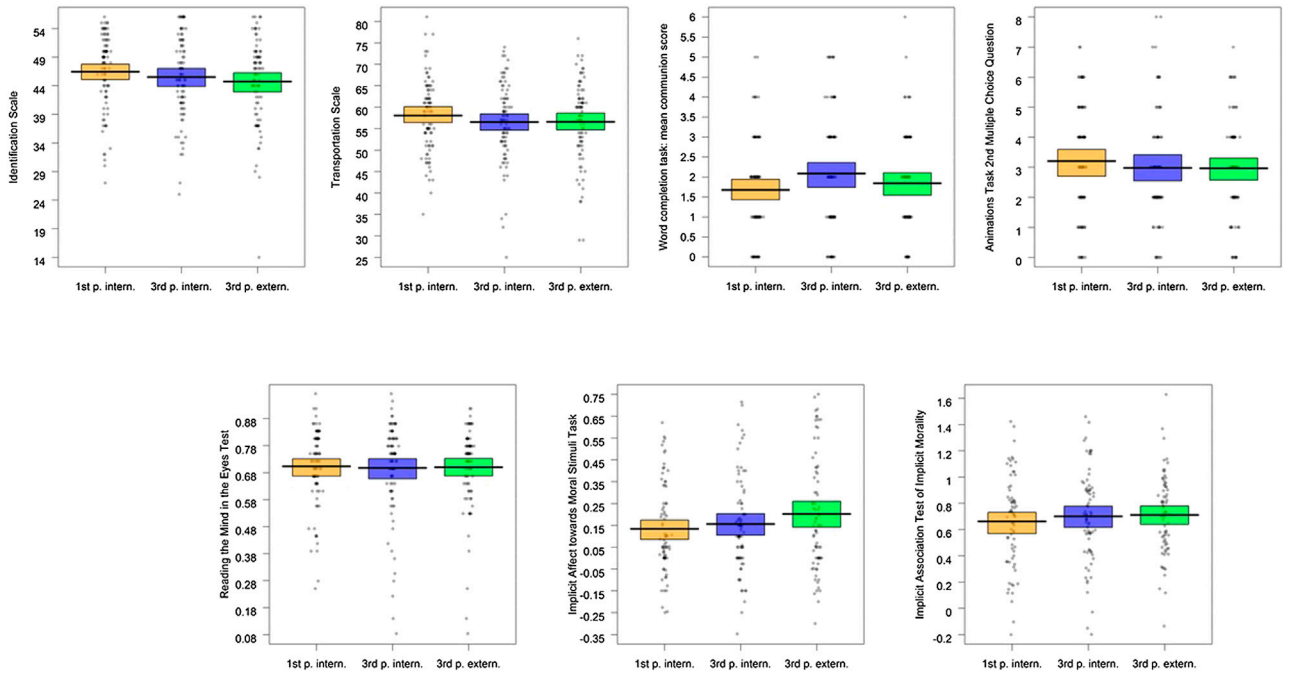

FIGURE 3 | Pirate plots for main outcome variables of Experiment 1.

predictor and the following variables as covariates: fiction sub-score of the Author Recognition Test–Genres, education level (operationalized as highest qualification), trait empathy (operationalized as Empathy Quotient sum score). These variables were included as covariates since education, expertise (i.e., lifetime exposure to narrative fiction as reflected by the Author Recognition Test–Genres fiction sub-score), and trait empathy are assumed to impact on transportation and identification (Consoli, 2018). For the Implicit Affect towards Moral Stimuli task, the IACS score was included as an additional covariate to control for morally irrelevant affect.

Mediation analyses were calculated using PROCESS macro (Model 6 with 2 mediators) in SPSS. One mediation was carried out for each indicator of social/moral cognition, transportation and identification were considered mediators, and text was the predictor. The mediation models did not include covariates since, firstly, this would have reduced statistical power; and secondly, inclusion of covariates was not vital for testing our hypothesis regarding the mediational role of transportation and identification.

Eighty-two missing items values - 81 from the Empathy Quotient, 1 from the Identification Scale – were imputed with the individual scale mean on the remaining items.

Results

Main Analyses

For each dependent measure, descriptive statistics and inferential statistics of the main effect of text are summarized in **Table 3**, and the key effects are plotted in **Figure 3**. Replicating previous research with the Implicit Affect towards Moral Stimuli task, participants overall were significantly more likely to judge a pictograph as pleasant after a positive moral prime than after a negative moral prime (M = 0.64 *vs* 0.46; t (299) = 12.12, $p < 0.001$, d = 0.68), and were significantly more likely to judge a pictograph as pleasant after a positive morality-irrelevant control stimulus than after a negative morality-irrelevant control stimulus (M = 0.70 *vs.* 0.45; t (296) = 16.28, $p < 0.001$, d = 0.95). This supports the underlying assumption of the Implicit Affect towards Moral Stimuli task that ratings are biased towards prime valence. Overall accuracy on the Reading the Mind in the Eyes Test-Revised and animations tasks was good (M = 70% and 1.94, respectively), and the positive mean D6 value (M = 0.69) in the moral IAT is consistent with previous research showing a preference for an implicit moral self-concept. Taken together, these data confirm that across the tasks, accuracy was comparable with previous studies, which suggests similar levels of compliance with instructions.

None of the ANCOVAs revealed a significant effect of text ($ps > 0.10$). Looking at the impact of covariates, Empathy Quotient sum score had a significant effect on the identification scale, F (1, 245) = 38.82, $p < 0.0001$, $\eta_p^2 = 0.137$, on the transportation scale, F (1, 245) = 34.74, $p < 0.0001$, $\eta_p^2 = 0.124$, on the D6 score in the implicit moral identity IAT, F (1, 207) = 4.31, $p = 0.039$, $\eta_p^2 = 0.020$, and on the agency score in the word completion task, F (1, 245) = 5.63, $p = 0.018$, $\eta_p^2 = 0.022$. Bivariate correlations demonstrated that Empathy Quotient was positively related to each of these outcomes ($0.141 < r < 0.347$, $ps < 0.038$).

Furthermore, the fiction sub-score of the Author Recognition Test–Genres had a significant effect on the communion score in the word completion task, $F(1, 245) = 4.98$, $p = 0.027$, $\eta_p^2 = 0.020$, and the IACS score had a significant effect on the Implicit Affect towards Moral Stimuli score, $F(1, 208) = 113.75$, $p < 0.0001$, $\eta_p^2 = 0.354$. Both covariates were positively correlated with the respective outcome (rs = 0.138 and 0.605, respectively, ps < 0.025). There were no further significant main effects (ps > 0.07).

Mediations were calculated to test whether a potential relationship between reading narratives and improved social cognition was mediated by identification with characters and transportation into the story. Because all 95% confidence intervals of the indirect effect of story reading on any indicator of social/moral cognition through identification and transportation contained zero (95% CI of partially standardized relative indirect effect that came closest to excluding zero: [−0.0328, 0.090]), there was no evidence that the effect of reading stories on social cognition was mediated by identification or transportation.

Exploratory Analyses

Exploratory analyses examined whether the predominant lack of textual effects was the result of confounds with third variables, in particular familiarity with subject matter. According to a one-way ANOVA, participants in the three groups did not report different levels of familiarity with the subject matter of the text, indicated by respondents' answer to "Reflecting on your own life experiences, how familiar were the events in the story to you?", $p = 0.445$. However, familiarity was significantly positively correlated with transportation, $r = 0.30$, $p < 0.0001$ (this is in line with a previous finding by Green, 2004), and identification, $r = 0.22$, $p < 0.0001$ (and not correlated with remaining outcomes, ps > 0.20), showing that participants who were more familiar with the subject felt more transported into events in the text and identified to a greater extent with the character.

Discussion

Experiment 1 investigated whether the perspective from which a story is told, both in terms of narrative voice and focalization, affects readers' social and moral cognition immediately after reading. It also tested whether such distal effects are mediated by proximal outcomes of reading a narrative, in particular transportation into the story world and identification with the protagonist.

Hypothesis 1 predicted that performance on social and moral cognition tasks would be better after reading an internally focalized narrative than after reading an externally focalized narrative. This assumption was not supported by the present data, as none of the indicators of social or moral cognition differed between the three reading groups (first-person voice with internal focalization *vs* third-person voice with internal focalization *vs* third-person voice with external focalization).

Hypothesis 2 postulated that the narrative voice in which a story is told would not influence social or moral cognition. Since none of the outcomes differed between the three groups, this prediction was confirmed.

Hypothesis 3 assumed that effects of perspective on social cognition and morality would be mediated by transportation and identification with the story's protagonist. As none of the mediations revealed indirect effects of transportation or identification, this hypothesis was not supported.

Interestingly, the most proximal outcomes, i.e., transportation and identification, were affected by rather stable characteristics, namely trait empathy and familiarity with subject matter, as partly predicted by Consoli (2018), hypothesis 6. Possibly, such trait-level qualities determine more strongly how we are affected by narratives than textual features such as perspective and focalization. In that case it would not be surprising that no effects of the texts on more distal outcomes, such as ToM and emotion recognition, were observed.

However, the predominant lack of group differences could also indicate that the three story versions under investigation were not sufficiently diverse to yield measurable effects, especially regarding the difference between internal and external focalization. In line with this assumption, the participants in the external focalization group had far more difficulty recognizing that their version of the story was told by an anonymous narrator than participants in the first-person group had in recognizing that that their version was told by the mother (18 *vs.* 1 participants failed the comprehension check in each condition, respectively; see also **Figure 2** and Participants section above). Apparently, a substantial number of participants perceived the third-person version with external focalization to be at least partly told by the mother, even though the third-person voice clearly indicated that the protagonist was not the narrator. Taken together, the external focalization version may not have been sufficiently external, which could have driven the lack of group differences in both proximal effects (i.e., transportation, identification) and distal outcomes (i.e., social and moral cognition). To test this possibility, in Experiment 2 we further edited the externalized version of the third-person narrative to reinforce the external focalization. We then compared this new version with the two internal focalization versions used in Experiment 1, testing for the same effects as in that experiment.

EXPERIMENT 2

Materials and Methods

The Research Ethics Committee of the School of Psychology at the University of Kent, United Kingdom, approved the study prior to its start. Unless otherwise mentioned, methodological procedures were the same as in Experiment 1.

Participants

The target sample was reached after 334 volunteers. This time, only nine participants who read the external third-person version of the story indicated that the story was told by the mother (i.e., participant failed check of text comprehension; see **Figure 4**), suggesting that the measures taken did further externalize this story version. When exclusion criteria were applied, 262 participants remained in the final sample, 86 of whom had read the first-person narrative with internal focalization (60.50% female, mean age = 33.63, *SD* of age = 13.58), 86 who had read the third-person narrative with internal focalization (65.1% female, mean age = 31.47, *SD* of age = 12.24), and

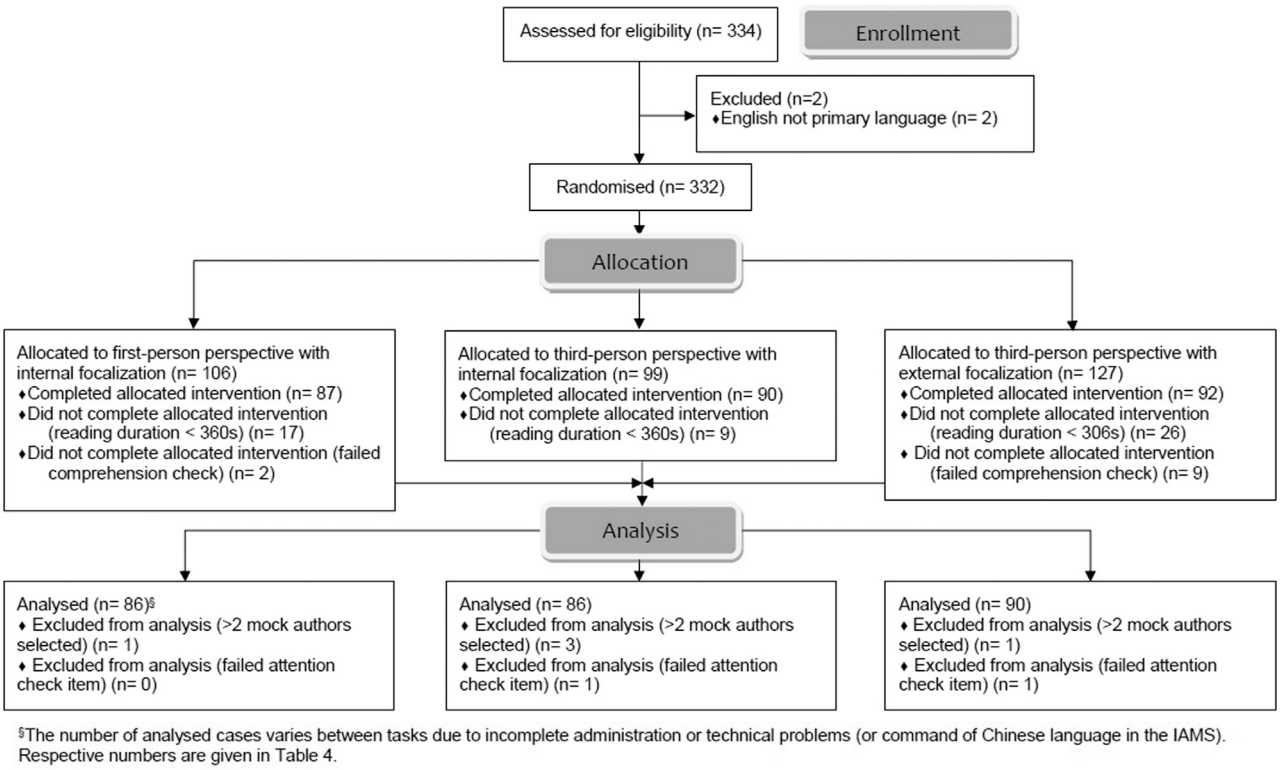

FIGURE 4 | Flow of participants through Experiment 2.

TABLE 4 | Exemplary comparison of the text stimuli used in Experiments 1 and 2.

third-person narrative, external focalization, used in experiment 1	third-person narrative, external focalization, used in experiment 2
As the bus approached Sloane Square, the women stubbed out their cigarettes and got up and came swaying along towards Marjorie, smelling of expensive perfume and of all the smoke they had inhaled. The great blue eyes of Bette stared at Marjorie for a moment. Later that evening she would whisper to Wallis, 'Wasn't that the woman with the caterwauling child at the station? What was she doing on our bus?' They went down the stairs and walked away. They did not look up. Marjorie jumped off the bus just as it was pulling away. She stumbled, but didn't fall.	As the bus approached Sloane Square, the women stubbed out their cigarettes and got up and came swaying along the aisle, smelling of expensive perfume and of all the smoke they had inhaled. The great blue eyes of Bette stared at Patience's mother for a moment. Later that evening she would whisper to Wallis, 'Wasn't that the woman with the caterwauling child at the station? What was she doing on our bus?' They went down the stairs and walked away. They did not look up. Patience's mother jumped off the bus just as it was pulling away. She stumbled, but didn't fall.

90 who had read the third-person narrative with external focalization (60.0% female, mean age = 32.86, *SD* of age = 13.34). See **Figure 4** for a schematic of the flow of participants through the experiment.

Reading Stimuli

Again, three versions of Rose Tremain's short story "The Closing Door" served as reading stimuli. In addition to the original third-person narrative with internal focalization and the first-person version, both of which were used in Experiment 1, the third-person version using external focalization used in Experiment 1 was further externalized by, e.g., referring to the protagonist, not as 'Marjorie', but as 'Patience's mother' or 'the mother', and removing descriptions of other characters that mentioned Marjorie's perspective on them. The new version now consisted of 2979 words. **Table 4** provides an exemplary comparison of the two third-person versions with external focalization used in Experiment 1 and Experiment 2; full stimuli are available on the Open Science Framework, https://osf.io/ef6a5/.

Assessment Tasks

The same measures as in Experiment 1 were applied. The following internal consistencies were observed in the sample of Experiment 2: Empathy Quotient: Cronbach's $\alpha = 0.88$, Transportation Scale: Cronbach's $\alpha = 0.76$, Identification Scale: Cronbach's $\alpha = 0.87$.

Results

Main Analyses

For each dependent measure, descriptive statistics and inferential statistics of the main effect of text are summarized in **Table 5**, and the key effects are plotted in **Figure 5**. Fifty-

TABLE 5 | Experiment 2: Descriptive statistics for each dependent measure in each experimental group, and ANCOVA results for the main effect of text.

Dependent measure		First-person narrative with internal focalization		third-person narrative with internal focalization		third-person narrative with external focalization		ANCOVA: main effect of text			
		n	*M (SD)*	*n*	*M (SD)*	*n*	*M (SD)*	df	*F value*	*p value*	η_p^2
Word completion task	Agency score (possible range: 0–7)	84	3.40 (1.37)	84	3.67 (1.32)	89	3.28 (1.41)	2, 251	1.86	0.158	0.015
	Communion score (possible range: 0–7)	84	1.86 (1.31)	84	1.54 (1.08)	84	1.65 (1.21)	2, 251	1.57	0.211	0.012
Frith-Happé animations task	MCQ 1: Accuracy sum score (possible range: 0–4)	84	1.67 (1.06)	84	2.05 (1.02)	89	2.00 (1.13)	2, 251	2.89	0.058	0.022
	MCQ 2: Accuracy sum score (possible range: 0–8)	72	2.49 (1.46)	78	3.01 (1.64)	79	3.09 (1.60)	2, 223	3.31	0.038	0.029
RMET: Relative frequency of correct responses (possible range: 0–1)		84	0.69 (0.17)	84	0.69 (0.20)	89	0.69 (0.18)	2, 251	0.01	0.986	0.000
Implicit affect towards moral stimuli score (possible range: 0–1)		74	0.20 (0.25)	67	0.15 (0.19)	77	0.20 (0.24)	2, 211	2.09	0.126	0.019
Implicit moral identity IAT: D6 (possible range: -2-2)		68	0.59 (0.38)	65	0.60 (0.35)	73	0.68 (0.30)	2, 200	1.41	0.247	0.014
Transportation Scale (possible range: 12–84)		84	56.81 (7.48)	84	58.24 (9.25)	89	56.92 (10.46)	2, 251	0.13	0.881	0.001
Identification Scale (possible range: 8–56)		84	46.56 (6.00)	83	47.27 (6.04)	89	45.61 (7.58)	2, 250	0.57	0.569	0.005
Author Recognition Test – Genres: Fiction sub score (possible range: 0–110)		86	15.45 (15.81)	86	15.10 (16.40)	90	16.94 (16.84)				
Empathy Quotient (possible range: 0–80)		85	43.55 (10.92)	85	46.03 (11.07)	90	43.33 (12.98)				

Note. *MCQ, multiple choice question; RMET, reading the mind in the eyes test–revised; IAT, implicit association test.*

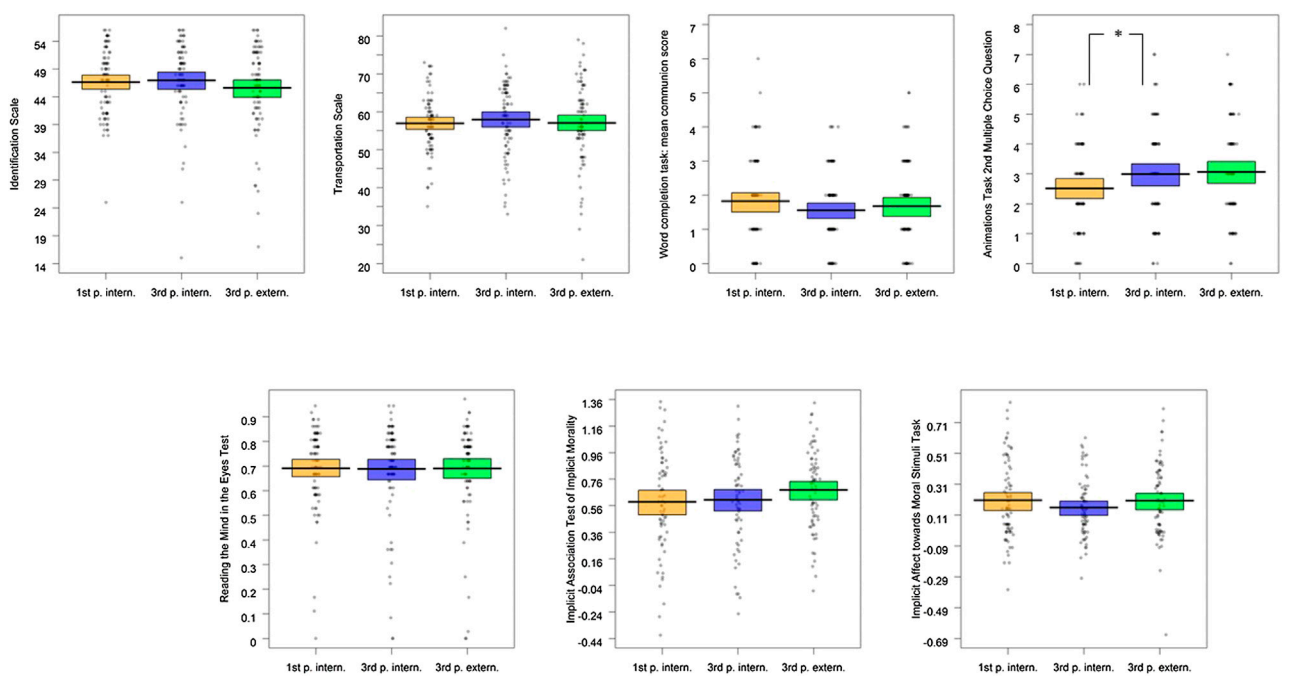

FIGURE 5 | Pirate plots for main outcomes variables of Experiment 2.

seven missing items values - 53 from the Empathy Quotient, 2 from the Identification Scale, 2 from the Transportation Scale - were imputed with the individual scale mean on the remaining items. Missing values for 3 further participants - 2 from the Empathy Quotient, 1 from the Identification Scale - could not be imputed because more than 20% of scale items were missing. The respective scales of these participants were omitted from final analyses.

Replicating previous research with the Implicit Affect towards Moral Stimuli task, participants overall were significantly more likely to judge a pictograph as pleasant after a positive moral prime than after a negative moral prime (M = 0.70 *vs.* 0.44; t (225) = 13.11, $p < 0.001$, d = 0.84), and were significantly more likely to judge a pictograph as pleasant after a positive morality-irrelevant control stimulus than after a negative morality-irrelevant control stimulus (M = 0.63 *vs.* 0.44; t (225) = 12.52, $p < 0.001$, d = 0.83). This supports the underlying assumption of the Implicit Affect towards Moral Stimuli task that ratings are biased towards prime valence. Overall accuracy on the Reading the Mind in the Eyes Test-Revised and animations tasks was good (M = 69% and 1.89, respectively), and the positive mean D6 value (M = 0.62) in the moral IAT is consistent with previous research showing a preference for an implicit moral self-concept.

Only one of the ANCOVAs showed a significant effect of text (all others, ps > 0.05). Specifically, the second set of multiple choice questions in the animations task, F (2, 223) = 3.31, p = 0.038, η_p^2 = 0.029, revealed that the internal third-person version outperformed the first-person version, contrast estimate = −0.544, SE = 0.253, 95%CI [−1.044, −0.045], p = 0.033, but did not differ from the external third-person version, contrast estimate = −0.043, SE = 0.248, 95%CI [−0.532, 0.446], p = 0.863. This pattern suggests that reading a third-person narrative may have had a greater impact on ToM compared to a first-person narrative, regardless of focalization.

As to the impact of covariates, Empathy Quotient sum score had a significant effect on the identification scale, F (1, 250) = 39.89, $p < 0.0001$, η_p^2 = 0.138, on the transportation scale, F (1, 251) = 26.11, $p < 0.0001$, η_p^2 = 0.126, and on the first multiple choice question in the animations task, F (1, 251) = 4.17, p = 0.042, η_p^2 = 0.016. Bivariate correlations demonstrated that Empathy Quotient was positively related to each of these outcomes ($0.150 < r < 0.387$, ps < 0.016). Furthermore, the fiction sub score of the Author Recognition Test–Genres had a significant effect on the percentage of correct responses in the Reading the Mind in the Eyes Test-Revised, F (1, 251) = 4.01, p = 0.046, η_p^2 = 0.016, and on the second set of multiple choice questions in the animations task, F (1, 223) = 8.80, p = 0.003, η_p^2 = 0.038. The Author Recognition Test–Genres fiction sub score was positively correlated with both outcomes, Reading the Mind in the Eyes Test-Revised: r = 0.065, p = 0.065; animations task: r = 0.203, p = 0.002, however, correlations reached significance for the animations task only. The IACS score had a significant effect on the implicit affect towards moral stimuli score, F (1, 211) = 172.76, $p < 0.0001$, η_p^2 = 0.450, and was significantly positively correlated with this outcome, r = 0.668, $p < 0.0001$. There were no further significant main effects (ps > 0.05).

Mediations were calculated to test whether a potential relationship between reading stories and improved social cognition was mediated by identification with characters and transportation into the story. All 95% confidence intervals of the indirect effect of story reading on any indicator of social cognition through identification and transportation contained zero (95% CI of partially standardized relative indirect effect that came closest to excluding zero: [−0.0145, 0.0093]), thus the result supported Experiment 1 in showing no evidence that the effect of reading stories on social cognition is mediated by identification and transportation.

Exploratory Analyses

Exploratory analyses examined whether the predominant lack of textual effects was the result of confounds with confound variables, especially familiarity with the subject matter (as in Experiment 1). According to a one-way ANOVA, participants in the three groups did not differ in this respect, p = 0.444. However, familiarity was significantly positively correlated with transportation, r = 0.30, $p < 0.0001$, and the Author Recognition Test–Genres fiction sub score, r = 0.14, p = 0.023 (and not correlated with remaining outcomes, ps > 0.15).

Discussion

Experiment 2 tested the same research questions as Experiment 1, namely whether the perspective from which a written narrative is told, both in terms of narrative voice and focalization, impacts on recipients' levels of general ToM, emotion recognition, and morality immediately after reading; and whether such distal effects are mediated by proximal outcomes of reading a narrative, particularly transportation and identification. Compared with Experiment 1, Experiment 2 used a stronger manipulation of focalization for the version of the story with third-person narration and external focalization. The remaining methods replicated those used in Experiment 1.

Hypothesis 1 (social and moral cognition would be higher after reading a narrative told through internal focalization than external focalization) was again not confirmed. Similar to Experiment 1, most indicators of social and moral cognition did not differ between the three reading groups (first-person voice with internal focalization *vs* third-person voice with internal focalization *vs* third-person voice with external focalization), and the only significant group difference (i.e., in the animations task) was that the first-person narrative with internal focalization scored lower than both third-person versions.

As in Experiment 1, hypothesis 2 (the narrative voice in which a story is told would not affect social or moral cognition) was mainly corroborated, since most dependent measures did not differ between the three groups. However, the only significant group difference was in contrast to hypothesis 2: the first-person with internal focalization group scored lower on the animations task measuring ToM than the third-person with internal focalization group. Thus, although this effect of voice did not emerge in Experiment 1, raising the possibility that it

reflects a false positive, it could suggest that reading a third-person narrative may have had a greater impact on ToM compared to a first-person narrative, regardless of focalization.

Paralleling the implication of Experiment 1, hypothesis 3 (effects of perspective on social and moral cognition would be mediated by transportation and identification with the story's protagonist) was rejected because none of the mediations detected indirect effects of transportation or identification. In addition, transportation was positively linked with trait empathy and familiarity with subject matter, and identification (but not familiarity with subject matter as found in Experiment 1) was associated with trait empathy.

In summary, despite implementing an even more externalized version of the external focalization version, which should have facilitated the detection of focalization-based effects (if there were any), Experiment 2 failed to observe any benefits of internal over external focalization. The finding that participants in the third-person with external focalization group in Experiment 2 were more likely to recognize that the story was told by an anonymous narrator than in Experiment 1 (9/101 = 8.91% of participants in Experiment 2 *vs.* 18/104 = 17.31% of participants in Experiment 1 failed the comprehension check) provides a manipulation check. It demonstrates that the measures taken to further externalize the external focalization version served their purpose. Therefore, Experiment 2 renders it unlikely that the lack of focalization-based effects in Experiment 1 was due to a lack of contrast between the three story versions.

GENERAL DISCUSSION

A recent wave of research has suggested that reading narratives offers a means to improve our social cognition, a set of skills crucial for everyday interpersonal functioning. These effects are often associated by theorists in other disciplines with moral improvement. The present research investigated whether potential narrative-related benefits for both social and moral cognition depend on the perspective/voice from which narratives are told, and the degree to which readers are transported into the story world and identify themselves with story characters. The two experiments reported here do not suggest that perspective has a significant impact on the extent to which narratives modulate social and moral cognition, either directly or as an indirect effect of transportation or identification. Indeed, exploratory analyses using the combined sample from Experiments 1 and 2 (N = 520) also failed to reveal significant differences between the three texts on our measures of social or moral cognition, showing that the null effects cannot be explained by insufficient power to detect a small effect size.

Whilst previous empirical work has investigated narrative perspective almost exclusively in terms of narrative voice, despite Genette's (1980) seminal distinction between narrative voice and focalization, the present research manipulated voice and focalization separately to disentangle the contribution of both aspects. We found no effects of focalization on either proximal effects (transportation/identification) or distal outcomes (social/moral cognition). The null result for identification is inconsistent with the only pre-existing experiment on focalization by Salem et al. (2017), where story versions using internal focalization, i.e., first-person and psycho-narration, were associated with an enhanced tendency to take the protagonists' perspective (they did not measure transportation/social cognition/moral cognition). The divergence may be explained by several differences between the study by Salem et al. (2017) and the present experiments. For instance, the text stimuli used by Salem et al. (2017) were short excerpts whose length was approximately 15% of the word count of the complete short stories used in the present experiments. Secondly, Salem et al. (2017) deployed three measures of perspective-taking: relatedness (extent to which readers can relate to the protagonist), spatial perspective-taking, and identification (psychological perspective-taking). Only the third, identification, overlapped with our study, where it was measured in a similar though not identical way. But the effects of internal focalization were almost entirely on the other two measures, relatedness and spatial point of view, rather than on identification. Future investigations using a variety of text stimuli and broad assessments of identification are needed to identify the conditions under which narrative perspective influences transportation into the story world and identification with characters.

In line with our prediction, perspective in terms of narrative voice did not consistently influence ToM and morality. Only one dependent measure was affected by narrative voice in one experiment (and did not replicate across the two experiments), though the one finding suggested that the first-person narrative using internal focalization was *less effective* in enhancing ToM to the third-person version using internal focalization. Given the inconsistency on affected outcomes, our results do not support a robust effect of narrative voice on social or moral cognition.

Finally, the lack of mediation by transportation or identification could be explained by the non-existent effect of focalization on more distal outcomes referring to social and moral cognition. The consequent lack of variation in these outcomes may have made the detection of mediating effects more difficult. Nevertheless, the present lack of perspective-based effects on identification contradicts the notion that linguistic cues about a character's point of view facilitate identification with this character, as predicted by the Linguistic Cues Framework (van Krieken et al., 2017). According to this model, stories using internal focalization should lead to greater identification than external focalization stories, since the former provide more information about the character's mental life than the latter. Hence, the current pattern of findings encourages a revision of the Linguistic Cues Framework to achieve a more exhaustive account of the factors eliciting identification with narrative characters.

The results of our exploratory analyses seem to suggest that trait-level variables, in particular dispositional empathy, have a greater impact on identification than textual characteristics, in particular narrative perspective. In other words, how much readers identify with a particular story character seems to depend mainly on readers' pre-existing level of trait empathy;

the current results do not show that variations of narrative perspective have the power to override the influence of trait empathy, at least if these variations concern a short reading assignment. Individuals with a strong dispositional tendency to empathize with others seems to apply this tendency also in the case of reading a short story, whereas individuals with weak dispositional empathy apparently also do not tend to empathize with characters of a short story; the perspective from which a given story is told does not seem to modulate such a disposition. This implies that theories of character identification should include relevant reader traits. It should however be borne in mind that the effect of trait empathy observed in the present research was an incidental finding not related to hypothesis testing. Clearly, targeted investigations are needed to clarify the role of reader traits *vs* text properties within processes of character identification.

This seems particularly desirable in view of similar recent experiments which observed a stronger impact of rather stable reader traits on experience and processing of narratives than state-level variables, i.e., narrative voice of reading stimuli and mental imagery instructions during reading, respectively (Hartung et al., 2017a; Mak et al., 2020). The available evidence suggests that the effects of reading short narratives is, to a relatively large degree, determined by pre-existing reader traits, and less so, if at all, by state variables including textual variations. Mischel's (1977) concept of situation strength may provide an explanation for this pattern, if we consider reading short stories as "weak situations". Mischel's (1977) introduced the concept of situation strength to explain whether behavior is shaped by stable personality traits (applied to the current experiments: trait empathy) or temporary situational influences (applied to the current experiments: reading a short story told from a certain narrative perspective). According to Mischel, situational impact is crucial in strong situations, which "lead everyone to construe the particular events the same way, induce uniform expectancies regarding the most appropriate response pattern, provide adequate incentives for the performance of that response pattern and require skills that everyone has to the same extent" (p. 347). In contrast, behavior is assumed to be determined by personality traits in weak situations, which "are not uniformly encoded, do not generate uniform expectancies concerning desired behavior, do not offer sufficient incentives for its performance, or fail to provide the learning conditions required for successful genesis of behavior" (p. 347). Future work could explore this explanatory approach, for instance by investigating whether the impact of state variables, e.g., textual properties, increases with increasing length of reading assignments (i.e., when situational impact is strengthened).

Taken together, the present results do not support the proposal that either narrative voice or perspective/focalization underlies the benefits, if any, of reading narratives for social and moral cognition. Since we applied the Reading the Mind in the Eyes test, the indicator of social cognition most frequently used in previous experiments observing narrative-based benefits for social cognition (cf. **Table 1**), we can rule out that the null effects trace back to the use of incomparable measures. There is also no evidence in our study to suggest that transportation or identification mediate the relationship between reading narratives and ToM/moral cognition. However, these findings may be limited by the stimulus texts and measurement instruments applied.

The pre-existing evidence for immediate effects of reading a story on social cognition has been relatively weak (Dodell-Feder and Tamir, 2018). However, even if such effects exist, they are unlikely to be produced by all stories (e.g. Mar, 2018). So it is possible that the story used in the current experiments was not suitable to evoke the effects under investigation. Future research should consider a broader spectrum of textual stimuli and dimensions of identification, which may provide a more complete picture of the conditions under which narratives foster our social cognition. Still, one would assume that if text features such as voice and focalization have an effect, they should do so in more than one type of story.

CONCLUSION

Two experiments consistently showed that narrative perspective, either in terms of narrative voice or focalization, did not influences readers' social or moral cognition, either directly, or indirectly via transportation into the story world or identification with the protagonist. Narrative perspective also did not affect transportation or identification. This suggests that the short-term benefits of reading fictional narratives found by other studies may not have been reliant on perspective. Furthermore, the present findings cast doubt on models that propose a central role of narrative perspective for identification with a story character; instead, the current pattern points to the possibility that reader traits, especially empathy, could determine identification to a greater extent than narrative perspective. These possibilities should be tested in future research. In addition, we encourage studies that assess multiple dimensions of identification and employ a broad range of stimulus texts to facilitate generalization of claims.

DATA AVAILABILITY STATEMENT

The datasets presented in this study can be found in online repositories. The names of the repository/repositories and accession number(s) can be found below: Open Science Framework, https://osf.io/6gsqn/ (Experiment 1), https://osf.io/vh6re/ (Experiment 2).

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Research Ethics Committee of the School of Psychology at the University of Kent, United Kingdom. The

patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

All authors designed the study, read and approved the submitted version. LW contributed to data collection, performed the statistical analysis, and wrote the first draft of the manuscript. SF, CG, and HF commented and made edits on the draft manuscript.

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