SOCIAL CONNECTION AND FICTION:

THE POSSIBLE BENEFIT OF "INTERACTING" WITH
FICTIONAL CHARACTERS

by

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A THESIS

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This study addresses one role that fiction may play in people's lives – specifically, providing social "interaction." Participants (265 University of Oregon students) completed a writing task that involved writing about fictional characters and completed measures of social fulfillment to see if that interaction may fulfill social needs and alleviate loneliness. We hypothesized that higher transportation scores – the immersion produced by the story as judged by an outside reader's perspective – would predict lower participant loneliness scores for participants who are writing from the perspective of a fictional character, to a fictional character, or their own journal entry. Furthermore, we hypothesized that the media source of the fictional character chosen by the writer will moderate this relationship, with written source media producing higher transportation scores and lower loneliness scores than visual source media. Finally, we hypothesized that participants who wrote more fiction or journaled outside of the context of the study would write passages that earned higher transportation scores and also report lower loneliness scores. Results indicated that coder-rated transportation does not significantly predict a larger reduction in loneliness scores. Neither media type nor participants' own writing outside of the study moderated the relationship between

transportation and change in loneliness. Results may have implications for developing a writing intervention to alleviate loneliness.

Keywords: Loneliness, transportation, fiction, fictional characters, writing

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Introduction

The first two years of the COVID-19 pandemic saw a large increase in self-identified loneliness paired with a massive increase in people interacting with media. With the COVID-19 pandemic's lockdowns and stay at home orders, researchers have found that during the first six months of the pandemic self- identified loneliness has significantly increased (Killgore, Cloonan, Taylor et al., 2020). Similarly, media interaction has also significantly increased. While Netflix added 28 million subscribers in all of 2019, they added 26 million new subscribers in just the first six months of the pandemic (Vlassis, 2021). This phenomenon has not just been limited to movies and television: Overdrive, a digital distributor of online content, including ebooks, reports that weekly library ebook lending saw an increase by 50% in the same first six months of the pandemic (Guren, McIlroy, Siek et al., 2021). The simultaneous increases in loneliness and increases in media consumption suggest that media may serve as a sort of social proxy in people's lives.

With pandemic lockdowns, people have also been interacting with fiction in a more immersive way than consuming television or books. People have also been writing and reading fan written narratives. Fanfiction has been a popular way for many people to interact with fictional characters, even before the Covid-19 pandemic. Many people spend their free time writing fictional narratives about their favorite fictional characters, while also interacting with an online community of fans that support and read their fanfiction. Archive of Our Own (Archive of Our Own, 2020), a popular fanfiction website, supported over 6 million unique works of fanfiction, with 2.5 million registered users, as of 2020 (Archive of Our Own, 2020). Furthermore, Archive of Our

Own reported increased comments on fanfiction works and overall number of written fanfictions when lockdowns began to happen in March 2020. As loneliness has increased during the pandemic, more people have been turning to entertainment, including fanfiction. This could indicate a connection between interacting with fictional characters, especially in written narratives like fanfiction, and loneliness.

Although the popularity of fanfiction websites indicates that many people are interacting with fictional characters through writing and could indicate a connection between fanfiction use and loneliness, there has been limited research on the connection between loneliness and actively interacting with fictional characters through writing. Writing about fictional characters could reduce loneliness. The current rise in loneliness increases the importance of studying the potential effects writing can have on well-being. The current study aims to understand how interacting with fictional characters through writing may alleviate loneliness.

Current research reveals that there is a gap in understanding how writing can influence people's emotions in ways that are different from the influence of reading or watching fiction in the form of films or plays. Although there is support for the idea that *consuming* fiction can change emotions, few have included *writing* in their analyses (Bal & Veltkamp, 2013; Djicik, Oatley, Zoeterman et al., 2009; Mar & Oatley, 2008).

Many studies have concluded that interacting with fiction can change emotional states and self-concept. Bal and Veltkamp (2013) found that reading fiction (in this case, an excerpt of a Sherlock Holmes short story) compared to informative reading (about riots in Libya and the nuclear disaster in Japan), could increase a participant's level of empathic concern. In addition, Djikic et al. (2009) found that when participants

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read *The Lady with The Toy Dog* by Chekhov, they had a significantly greater change in self-identified personality traits on the Big Five Inventory than when they read a comparison text that had the same information in documentary form. Despite both studies providing support for fiction evoking changes, there needs to be caution in the assumption that fiction could create permanent change. A more cautious route would be to interpret the changes as a temporary shift (Dijikic et al., 2009). However, even temporary change might still support at least a momentary lapse in loneliness through interacting with fiction.

Gabriel and colleagues (2017) found that thinking about fictional characters filled social needs for participants who had experienced trauma. This finding, coupled with prior research that has established that interacting with fictional characters through reading or watching media can change emotional states, supports the idea that interacting with fictional characters through writing could also influence how writers feel.

Research has found that fiction can also change one's sense of self. Derrick et al. (2008) found that people with low self-esteem can use parasocial relationships – one-sided relationships with media persona that develop through a sense of shared experiences and a sense of knowing the person (Derrick et al., 2008) – to move towards developing attributes that participants used to describe an ideal self. Similarly, Sestir and Green (2010) found that exposure to media characters can temporarily change the self- concept. They used a "Me/Not-Me" reaction time task that tested how fast participants responded to a list of traits as either descriptive of the self or not. This task allowed the researchers to gain a better understanding of how identification with a

character affects an individual's sense of self. However, Sestir and Green (2010) found that an essential component to experiencing a change in self-concept was participants' immersion in the piece of fiction. This immersion in the fiction, also known as transportation, moderated the relationship between fiction and change in self-concept.

Transportation

Other studies along with that by Sestir and Green (2010) have also indicated that in order for fiction to produce a change of self, transportation needs to be present (Bal & Veltkamp 2013; Mar, Oatley, Hirsch et al., 2006). According to Green and Brock (2000), transportation refers to the experience of a reader being cognitively, emotionally, and imaginatively immersed in a narrative world. As readers become more immersed in the story, the narrative subsequently becomes more "real," both emotionally and cognitively (Sestir & Green, 2010). Sestir and Green (2010) also found that the higher level of transportation participants experienced, the more likely they were to switch from initially not identifying with character traits to later self-identifying with those traits.

For the current study, we adapted the concept of transportation in a way that has not been represented in prior research. Due to the written component of our study, and the lack of research regarding transportation and writing, we aimed to analyze the transportive qualities of participant written narratives. Our conception of transportation analyzes the overall immersion *produced* by a writer's story as judged by an outside reader's perspective. This contrasts with other studies that include transportation as a variable and generally are interested in how transportation affects readers, not how transportive qualities of writing affect the writer. We aimed to operationalize a

participant's ability to write a transportive story rather than what prior research has analyzed, which was the reader's experience of transportation. A high amount of writer immersion in the story would seem to be needed to communicate a highly transportive narrative. Therefore, our concept of transportation may potentially be conceptually related with how prior research has handled the reader's experience of transportation.

Loneliness and Perceived Realness

Researchers have deemed social relationships as vital to mental and emotional health. Life without social relationships is related to significant psychological distress and poor health outcomes (Heinrich & Gullone, 2006). These negative outcomes highlight the need for a comprehensive understanding of loneliness and ways to combat it. Heinrich and Gullone (2006) identify loneliness as not only an unpleasant emotional experience, but that it also includes a cognitive aspect where people perceive a discrepancy between social relationships that they wish to have versus what they perceive they do have.

Although researchers have extensively studied loneliness in the context of social relationships with other people, there has been little research on loneliness in the context of non-traditional means of social fulfillment, which could include interacting with fictional characters. However, Paravati and colleagues (2020) examined the role of traditional and nontraditional means of social fulfillment in regards to life satisfaction. They created a new measure, the "Social Fuel Tank," to analyze the different means of social fulfillment. They included both traditional means of social fulfillment, such as family, friends, and romantic partner, and non-traditional means of social fulfillment, including gaming, reading books, and watching TV. They found that both traditional

and nontraditional means of social fulfillment uniquely predicted feeling less lonely. This study illuminates how non-traditional means of social fulfillment, potentially including writing, may be essential to understanding loneliness.

As one example of a non-traditional means of social fulfillment, studies have examined how fictional characters could assume a role in people's social relationships. Fictional characters encompass a one-way connection, but people can have distinct emotional experiences when interacting with them (McGee, 2005). These real experiences with fictional characters can cover a variety of emotions, including distress at the loss of a fictional character that is similar to losing a real social relationship (Cohen, 2004). Another study by Gardner and Knowles (2008) found that undergraduate students perceived their favorite television character as more real than non-favorite characters. These studies provide evidence of the perceived realness of fictional characters show the blurry line between real and fictional relationships.

In the context of writing, Taylor and colleagues (2003) examined how fiction writers experienced the *illusion of independent agency* (IIA). IIA encompasses how many fiction writers experience their characters as having their own independent thoughts and actions. The researchers found that 92% of authors in the sample they interviewed had at least some experience of IIA and that writers scored higher on measures of empathy and dissociation than population norms. The experience of IIA, along with higher dissociative tendencies that include the ability to become engrossed in activities, could contribute to an author obtaining social fulfillment through a fictional character.

The current study

  Thus, the pairing of perceived realness and the ability of non-traditional means of social fulfillment to alleviate loneliness lend support to the idea that interacting with fictional characters could provide social fulfillment. Drawing from a larger study on this general topic (Doyle, 2021), the current study aimed to dive deeper into the relationship between writing and loneliness to examine the levels of transportation in writing and loneliness. Unlike previous studies that have established a connection between *consuming* fiction and social fulfillment, the current study focuses on analyzing the level of transportation produced by participants' written narratives and its relationship to their loneliness. Furthermore, we hope to establish how the type of media that someone's favorite fictional character comes from, and how the amount of time someone spends writing fiction outside of the context of the current study, affect the relationship between transportation and loneliness.

Research Questions

RQ1: Does amount of transportation produced by a piece of writing about a fictional character predict loneliness scores?

> **Hypothesis 1:** Participants who produce writing about a fictional character with higher transportation scores will report less loneliness. This will be the case whether the participants write **FROM** the perspective of the fictional character, write **TO** the fictional character, or write a journal entry reflecting their own perspective, without any engagement of a fictional character, but after being asked to choose a favorite fictional character. (In the larger study from which the data for the current study are being drawn, Doyle (2021) already established that these between-subjects conditions do not have a main effect on loneliness.)

RQ2: Does the type of media that a fictional character comes from moderate the relationship between transportation and loneliness?

> **Hypothesis 2:** There will be a stronger relationship between transportation and loneliness for participants who write about characters that come from written media than there is between transportation and loneliness for participants who write about characters that come from visual media.

> Due to the written aspect of the study, this hypothesis was based in how written media may be better connected than visual media to a writing task. Furthermore, written media may also be more cognitively taxing in comparison to visual media. This could potentially limit people's ability to become

distracted and allow someone to become more immersed in writing, impacting how much social satisfaction someone obtains from interacting with the fictional characters.

RQ3: Does the amount of time participants spend writing (fiction or personal journaling) on their own time moderate the relationship between transportation and loneliness?

> **Hypothesis 3:** There will be a stronger relationship between transportation and loneliness in participants who habitually write fiction on their own time.

Method

The data for the current study come from a larger study (Doyle, 2021) that encompassed additional measures that are not included in the analyses below.

Participants

The participants of the study were 265 undergraduate students who were recruited from the Psychology and Linguistics Subject Pool at the University of Oregon in exchange for partial fulfillment of a class research requirement. Participant data collection occurred Spring quarter 2021 through Fall quarter 2021. Thus, all data collection occurred during the Covid-19 pandemic, during which participants experienced variability in lock downs and surges in Covid-19 cases. Before beginning the study, participants had no prior knowledge of the study or its goals. Participants were 18 to 36 years of age ($M = 19.7$, $SD = 2.4$), with 66.8% identifying as female (n = 177), 31.32% identifying as male (n = 83), 1.13% identifying as non-binary (n = 3), and two participants who chose not to answer the question. Of the participants, a majority were white at 59.24% (n = 157) and 91.32% (n = 242) were fluent in English with English as their first language. (In some cases, participants were missing some data and thus degrees of freedom in the analyses that follow fluctuate slightly.)

Procedure

After consenting to the online study (conducted via Qualtrics and Pavlovia), participants first completed some pre-manipulation measures of loneliness and mood (relevant measures are described below). Next, participants selected their favorite fictional character and were asked to identify the media source (e.g., book or television

show) that the character came from and the approximate year that the media with this character first came out. Participants were also asked to think about a person that they were very close to in their own life (e.g., a best friend or romantic partner). They were then asked to identify the person, by using first name, initials, or a nickname, and to specify what their relationship with the person is. They were also asked how long they had known the close other.

After their selection of these two individuals, participants completed a survey of traits (e.g., respectful, impulsive, childish, etc.). They were asked how well they thought each trait described themselves on a 5-point scale from "extremely inaccurate" to "extremely accurate." Participants also completed the Interpersonal Reactivity Index, a measure of self-reported empathy (Davis, 1983). However, neither of these measures were part of the present study.

Participants were randomly assigned to one of three writing prompts. They were asked to write 200 words as if writing *from* the perspective of the fictional character they earlier selected ("From" Group); as if writing a letter from themselves *to* the fictional character ("To" Group); or as a journal entry about their own life (Control Group). In all cases, the writing prompt asked participants to describe an instance of bad news, so that, for example, in the From Group, participants wrote from the perspective of the character they chose as the character received bad news; in the To Group participants wrote a letter from themselves to the character about bad news the character was receiving or had received; and in the Control Group participants wrote about a time that they received bad news. The choice of the "bad news" prompt was made as way to increase the chances that participants would make-up a new instance of bad news that

their chosen character had not already experienced in previous works. We wanted a prompt that would be compelling and unexpected, so that participants would need to put original thought into their writing. We chose to ask participants to write about bad news to try to elicit an emotional response, and left the prompt open ended so that participants could take the prompt in any direction they desired. Participants in the From Group and the To Group were asked to indicate how much the situation that they wrote about was similar to something experienced in previously produced media about the character, using a 5-point scale ranging from 1 = "not at all similar" to 5 = "almost exactly the same" (i.e., was the situation similar to something the character had experienced in their original story). Participants in the Control group were asked to rate on a 5-point scale how carefully they remembered their personal instance of receiving bad news, with 1 = "I don't remember it at all", and 5 = "I remember it very carefully, with great detail".

After the writing task, participants then completed the same loneliness and mood surveys, along with multiple other surveys that were not analyzed for the current study (see Appendix A for unrelated tasks and measures). Before participants finished the study, they answered questions about their personal writing practices outside of the context of the study, answered demographic questions, and completed other measures that were also not analyzed for this study. Participants were debriefed upon completion of the study.

Measures

Loneliness

The revised UCLA Loneliness Scale (Russel et al., 1980) was used to assess loneliness. This scale is made up of 20 items that include statements such as "I feel

isolated from others" and "I am unhappy being so withdrawn." Participants rated these statements on a 4-point scale that ranged from 1 to 4 (points were labelled never, rarely, sometimes, and often; higher scores indicated greater loneliness). The participants completed the loneliness scale twice --- once before and once after the writing prompt.

To analyze loneliness, our study utilized the loneliness change score for each participant, using post-writing minus pre-writing task loneliness scores. Thus, positive change scores indicated that a participant's loneliness increased during the study; negative change scores indicated that a participant's loneliness decreased during the study.

Past Creative Writing Experience

To assess participants' writing experience, participants answered four questions about how frequently they had engaged in creative fiction writing in the last year and prior to the last year; and how frequently they had engaged in journal or diary writing in the last year and prior to the last year. Answer options for these questions were "1 = No, never"; "2 = Yes, sometimes"; and "3 = Yes, often." In addition, participants were asked whether or not they had an imaginary companion as a child.

To analyze participants' writing experience, we summed each participant's score across all four writing habit questions. A score of 4 indicated that a participant did not participate in any form of habitual writing outside of the study and a score of 12 indicated that a participant had completed journal/diary and creative fiction writing often in the last year and prior to the last year. The mean on the scale was 6.44 (*sd =* 1.73). There were some participants who reported never having written (i.e., score of 4); the highest reported score was 11.

Coding of Transportation

The current study also utilized a coding scheme completed by seven trained undergraduate research assistants (including the author) to further understand trends in the participants' written narratives (see Appendix B for full coding manual). Research assistants were trained to code each written narrative for transportation and quality. Transportation, in this context, measured outside readers' (i.e., the trained research assistants') feelings of transportation while reading the participants' writing samples. Research assistants used a 5-point Likert scale that ranged from 1 to 5, with 1 indicating no transportation and 5 indicating that the coder experienced a lot of transportation, whether cognitively, emotionally, and/or imaginatively, into the written narrative. Coder reliability for transportation indicated an alpha of $a = .79$ with a confidence interval ranging from .75-.83. Mean transportation across the narratives was 2.97 ($sd = .741$).

Results

We tested our first hypothesis, that participants who produced writing that had higher transportation scores would report lower loneliness scores, with a linear regression. As stated previously, we utilized the loneliness change scores (post minus pre writing task). These change scores ($M = .006$, $sd = .213$) had a mean closer to zero and a small standard deviation, indicating that participants changed very little from pre to post writing task and exhibited little variability in loneliness. Our first hypothesis was not supported and transportation did not predict change in loneliness, $b = -.011$, $t(262) = -0.65$, $p = .517$. (Note that data points are jittered in the figures that follow.)
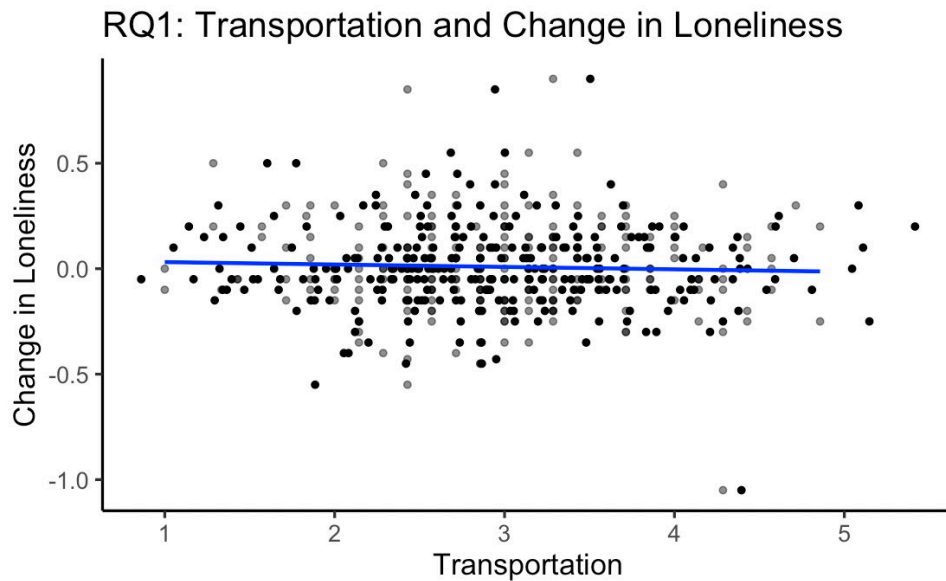

Figure 1. Transportation and Change in Loneliness

A nonsignificant relationship between transportation and change in loneliness

We tested our second hypothesis, that there would be a stronger relationship between transportation and change in loneliness if the participant chose their fictional

character from written media (as opposed to visual media). In order to test this, we ran a multiple regression predicting changes in loneliness from an interaction between transportation and type of media. The type of media variable used Books or Book Series as the reference category, so that all other media types (TV, Movies, Comic, Other) were in comparison to Books (see distribution of media types in Table 1). This hypothesis was not supported by our data. Transportation and media type did not significantly interact to predict change in loneliness in this model ($F(3, 260) = .2692$, $R^2 = .003$, $p = .848$). Transportation did not have a significant main effect on change in loneliness in this model ($b_1 = .005$, $t(260) = .084$, $p = .933$). Media type did not significantly predict change in loneliness in this model ($b_2 = .037$, $t(260) = .172$, $p = .864$). The interaction between transportation and media type also did not significantly predict change in loneliness ($b_3 = -.019$, $t(260) = -.290$, $p = .772$).

Table 1: Number of Participants that Chose Each Media Type

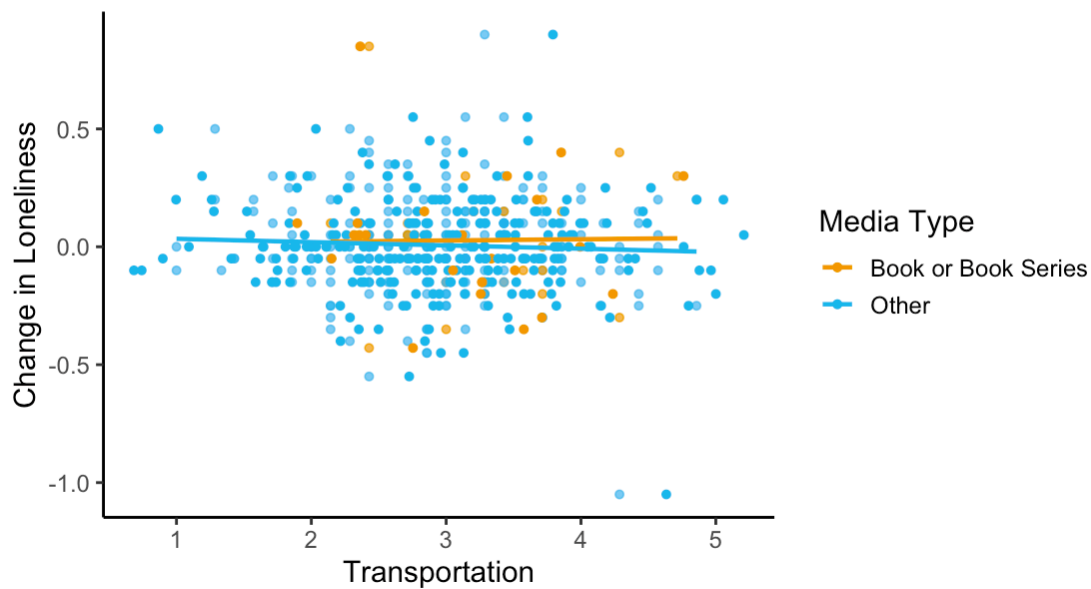| Books	TV	Movies	Comic	Other
26	146	68	6	19

Figure 2. Change in Loneliness Predicted by Transportation and Media Type

No moderation by type of media on the relationship between transportation and change in loneliness

We tested our third hypothesis, that there would be a stronger relationship between transportation and loneliness if participants wrote outside of the context of the study, with a multiple regression. This hypothesis was not supported. Transportation and participants' own writing frequency did not significantly interact to predict change in loneliness ($F(3, 259) = .2691$, $R^2 = .003$, $p = .848$). Transportation had no significant main effect on loneliness in this model ($b_1 = -.041$, $t(259) = -.598$, $p = .55$). Participants' own writing frequency also did not significantly predict change in loneliness in this model ($b_2 = -.016$, $t(259) = -.488$, $p = .626$). The interaction between transportation and

participants' own writing also did not significantly predict change in loneliness (b_3 =
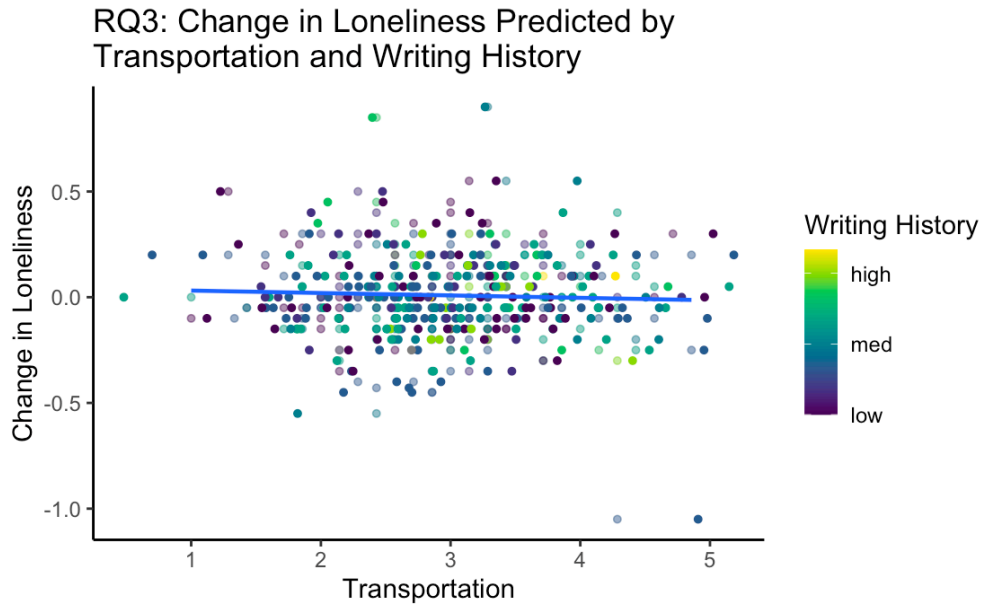
.005, $t(259)$ = .435, p = .664).

Figure 3. Change in Loneliness Predicted by Transportation and Writing History

 No moderation by participant's writing history on the relationship between

transportation and change in loneliness

Discussion

In this investigation of whether writing could help reduce loneliness, we found little support for our hypotheses. We did not find significant support for our first hypothesis that indicated participants who produced writing that had higher transportation scores would report lower loneliness scores (Hypothesis 1). We also did not find support for our other two hypotheses that indicated there would be a stronger relationship between transportation and loneliness if the participant chose their fictional character from written media (Hypothesis 2) or if the participant was someone who frequently wrote outside of the study (Hypothesis 3).

The results of the study did not support the idea that interacting with fictional characters through writing alleviates loneliness. This could indicate that there is no effect on loneliness from interacting with fictional characters. However, this study was limited in statistical power due to the sample size. Although the 265 participants may have been a large enough sample for our simple regression analysis that revealed no relationship between transportation and loneliness, it could be possible that our sample was not large enough to explore the interactions between variables tested here.

Furthermore, these hypotheses were exploratory. Previous research has been done on participant transportation (Bal & Veltkamp 2013; Mar, Oatley, Hirsch et al., 2006; Sestir & Green 2010), but not on the audience transportation that our study aimed to capture. We did not have participants rate their *own* transportation for their own pieces of writing; this was instead rated by trained undergraduate coders. Although our coders were reliable when coding our construct of transportation (a version of participant-rated transportation), a participant's own experience of transportation with

their own writing could have produced a different relationship between transportation and loneliness. In the current study, all we can conclude is that there was no effect between audience-perceived transportation and loneliness, but there is little to no other previous research on this topic and further research would need to be conducted to make firmer conclusions about this relationship.

Limitations and Implications for Future Research

Certain limitations of this study could be addressed in future research. For example, from a world-wide perspective, this study utilized an overwhelmingly Western, educated, industrialized, rich, and democratic (WEIRD) population that was further constricted to university students who were majority white. Due to our study participant limitations and the vast majority of research on engagement with fictional characters being done in North America and Europe, it remains unclear whether the study's findings would be generalizable to other populations.

Another possible influence on the results may have been the fact that participants were writing in a context that was not purely for themselves. This could have impacted how self-conscious participants may have felt while writing their narratives, especially considering these were provided in the context of an hour-long study and were accessible to researchers after participants finished. Participants may have had the idea that someone was going to read their writing while completing the written narrative which may have affected what they wrote, due to a desire for potential audience approval or to entertain the audience. It may be that people find more benefit from interacting with fictional characters through writing when they are only writing for

themselves (i.e., intrinsically motivate) and are afforded more privacy in their interactions.

Further analyses might also have yielded different results. Data analysis could have been broken down to multiple groups, such as comparing writing involving the fictional character to a participant's own journal/diary writing, to analyze the relationship between transportation and loneliness. This comparison may have proved fruitful; comparisons between writing groups is a central focus of the larger study from which these data were drawn.

This study was constricted to one hour, which limited the amount of time a participant could write for and did not allow the opportunity to test for more gradual or greater changes that may have been found if the study had been conducted over weeks or months. A future study on how loneliness could be impacted by writing may benefit from extending the duration of the study to weeks or months to have a fuller grasp on how habitual writing may influence loneliness.

The limited duration of the study also needs to be considered when looking at the loneliness measurement. The overall change in loneliness mean was close to zero ($M = .006$) and variability in change scores was low, indicating that most participants were experiencing very little change in loneliness. This could be due to the fact that participants completed the pre- and post-writing task loneliness measures within roughly 45 minutes of each other. This could have created pressure to provide similar answers for both surveys. Furthermore, loneliness may be too narrow of a construct to truly capture the benefits that people may experience from writing. We aimed to reduce the negative experience of loneliness within our study, but writing may create additional

positive experiences that were not captured through the narrow construct of loneliness. Previous research indicates that non-traditional means of social fulfillment, such as reading a book, can add depth and extra meaning to people's lives (Pavarti et al., 2020). Measures that capture additional positive benefits to people's lives, such as creative fulfillment, may be useful for future research to try to understand why many people write.

Despite our null results, this study has encouraged us to conduct future research that explores writing as a possible intervention for loneliness and how other factors may hinder or contribute to loneliness reduction. As previously mentioned, future research may consider lengthening the study itself to create habitual writing or may consider exploring workshops about writing activities that may help bolster loneliness reduction. Some of our null results may actually be seen as positive, in terms of developing writing as a means for reducing loneliness. Our second and third hypotheses indicate that character's media type and participant's own writing habits did not moderate the (lack of a) relationship between transportation and loneliness. This could indicate that it does not matter what media a fictional character is from for someone to receive benefits from interacting with that fictional character. In addition, a participant may not need to have their own writing habits outside of a writing intervention for a participant to receive the benefits of the writing intervention. These findings could have implications for future writing interventions and should be kept in mind when designing future research to try to reduce loneliness through interacting with fictional characters.

There is still work that needs to be done to fully unpack and understand the implications of immersive interactions with fictional characters, such as writing. Many

people associate writers with greater experiences of loneliness, but there are still questions around whether this is because writers write due to feelings of loneliness or if the (largely solitary act of) writing itself causes writers to be lonelier. Our research did not indicate that writing causes an increase in loneliness; however, more research is needed examining writers' emotional experiences. In addition, many people who write or interact with fictional characters do so in many more ways than simply writing alone. This leads to the conclusion that other variations on ways to "interact" with fictional characters may be explored. For example, fanfiction is a highly popular way to interact with fictional characters even after their franchises have ended. Many people form online communities around fanfiction and regularly interact through comment sections on websites, such as Archive of Our Own, but there is a currently limited understanding of how and why fanfiction is so popular. In addition, many people also participate in live action role play, cosplay, and other role play games where individuals actively take on the roles of fictional characters, whether through clothes, voices, or immersive experiences. In these contexts, not only do people interact with fictional characters by themselves, but many of these activities also include a group component that could provide fruitful insights into how and why people interact with fictional characters.

This research can be seen as a first step to understanding how interacting with fictional characters through writing affects loneliness, although the results suggest that there may not be a relationship between our primary predictor (audience-perceived transportation) and change in loneliness, and that this predictor is also not moderated by the character's media type and a person's own habitual writing. Despite these results, there still seems to be promise for the ability of writing to serve a purpose in people's

lives. This may not be realizable in loneliness reduction, but rather could be found in an added social/creative fulfillment or reduction in boredom, for example. Future research could lead towards creating a writing intervention to help ease loneliness by lengthening the study to form habitual writing, and by extension, potentially deeper relationships with characters. Overall, this study indicates that there needs to be more research on immersive fictional experiences and how fictional characters benefit people's lives.

Appendix A

Complete Larger Study Measures

Reaction Time – Self Traits

Participants responded either "Me" or "Not Me" to a series of 90 trait words and their reaction times were recorded using Pavlovia.

Trait Ratings

Participants rated the same 90 trait words for how well they describe themselves, the fictional character they chose at the beginning of the study, and for the real close other that they designated. Participants rated these traits for each of the three targets (self, character, and close other) on a 7-point scale that ranges from 1 = extremely inaccurate to 7 = extremely accurate. Before participants completed the writing intervention, they also rated another 45 of the trait words.

Measures:

Interpersonal Reactivity Index

To measure individual differences in self-reported empathy, participants completed the Interpersonal Reactivity Index (Davis, 1983) which consists of four subscales, each with seven items. Each subscale assesses a different facet of empathy, including perspective taking, empathic concern, personal distress, and fantasy (Davis, 1983). The index includes statements such as "I am often quite touched by things that I see happen" (empathic concern subscale) and "I really get involved with the feelings of characters in a novel" (fantasy subscale). Participants rated these statements using a 7-point scale that ranged from 1 ("does not describe me well") to 7 ("describes me very well").

Big Five Personality

To assess personality, embedded within the traits used for the reaction times were the traits from the Mini-Markers Scale (Saucier, 1994), which is a short measure of Big Five personality factors (Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism). Scores for the Mini-Markers were also collected during the trait ratings for the participant, the fictional character they chose, and their close other.

Mood

To assess participants' mood, participants completed the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988). They indicated how they felt in the present moment by rating words, such as enthusiastic and ashamed, on a Likert scale ranging from 1 (very slightly or not at all) to 5 (extremely). Participants completed the PANAS both before and after the writing prompt.

Character Liking

To assess how the participants felt about the fictional character that they chose at the beginning of the study, participants rated statements about their character, including "I think the character is like an old friend" and "I find the character to be attractive/cute." These items were based on those used in Gardner and Knowles (2008). Participants rated these statements on a 5-point scale that ranged from strongly disagree to strongly agree.

Demographic Information

At the conclusion of the study, participants provided demographic information about their age, race and ethnicity, gender, major or intended major, and fluency in English.

Social Fuel Tank

Participants completed the Social Fuel Tank measure developed by Paravati et al. (2020). This measure assesses participants' strategies for social need fulfillment by having participants assign percentages to 17 possible strategies that they might use to fill their social needs that include items such as watching TV or eating favorite foods. For each strategy, they indicated how well they felt the strategy met their social needs, ranging from 0 to 100 percent. Percentages were intended to add up to no more than 100 percent; a percentage less than 100 percent would indicate that the participants felt as though their social needs were not entirely being met.

Appendix B

Fiction Narrative Coding Manual

Number of Real Words:

Under the "number of real words" column, we will find the number of words that are used in each narrative using a word count function. If the "Completed" column indicates "no," then we will enter the number of words that are actual engagement with the prompt.

Followed Directions:

Under the "Followed Directions" column, we indicate whether or not participants followed the directions of the prompt:

- **Yes:** The participant followed the prompt's directions. For a narrative to be coded as "Yes" the participant only needs to start off their narrative following directions and they do not have to name the bad news.

- **No:** The participant did not follow the prompt's directions in their narrative. A "No" could include that they did not write about bad news, that they did not follow whether they were directed to write To the character or From the character's perspective or their own narrative, and other indications of not following the prompt not specified here. Coders should still continue to code the other categories even if the narrative is coded as "No."

- **Other:** The "Other" code encompasses narratives that do not fit into either the "Yes" or "No" category. These narratives tend to follow certain aspects of the prompt, but not others. These narratives include writing that switches to another perspective, does not follow the same narrative throughout the entire piece of writing, provides context notes to the audience, writing that is in 3rd person, and other indications of a partly followed prompt. Coders should still continue to code the other categories even if the narrative is coded as "Other."

Examples:

- **Yes:** My mom walked into the room and told me terrible news. I couldn't believe what I was hearing. It was such a terrible feeling.

- **No:** All I heard was blah blah blah blah blahhhh blahhhh blooblahhhhh blah blah blah blah blah blah blah blahhhh blahhhh blooblahhhhh blah blah blah blah blah blah blah blahhhh blahhhh blooblahhhhh blah blah blah. blah blah blah blah blahhhh blahhhh blooblahhhhh blah blah blah blah blah blah blah blahhhh blahhhh blooblahhhhh blah blah blah blah blah blah blah blahhhh blahhhh.

- **Other:** Jake found out that Captain Holt would be putting him under witness protection. This is significant to Jake because he loves to work and hates not being able to work a case. He thinks about Holt's words, but ultimately decides to work a case behind Holt's back.

Completed:

Under the "Completed" column we indicate whether or not the participant fulfilled the prompt.

- **Yes:** A "Yes" indicates that the participant fulfilled the prompt. The narrative does not have to achieve the word length indicated in the prompt and as long as the participant stays with the same idea throughout the narrative it can be coded as a "Yes."

- **No:** A "No" encompasses narratives that do not stick with the same idea throughout or narratives that include non-words that do not fit the overall narrative. Coders should still continue to code the other categories even if the narrative is coded as "No."

Examples:

- **Yes:** My mom walked into the room and told me that my dog had died. I couldn't believe what I was hearing. He had just been here yesterday, wagging his tail, ready to go for a walk… I hope I never lose another pet suddenly again.

- **No:** My mom walked into the room and told me that my dog had died. I couldn't believe what I was hearing. All I heard was blah blah blah blah blahhhh blahhhh blooblahhhhh blah blah blah blah blah blah blah blahhhh blahhhh blooblahhhhh

blah blah blah blah blah blah blah blahhhh blahhhh blooblahhhhh blah blah blah. My mom walked into the room and told me that my dog had died. I couldn't believe what I was hearing. All I heard was blah blah blah blah blahhhh blahhhh blooblahhhhh blah blah blah blah blah blah blah blahhhh blahhhh blooblahhhhh blah blah blah blah blah blah blah blahhhh blahhhh blooblahhhhh.

Context Notes to the Audience:

This category indicates whether or not the participant's narrative provided notes to the audience that give background information about the characters or their situations.

- Yes: A "Yes" includes sentences that add context to the audience that does not seem to be in place with the narrative.
- No: A "No" indicates that the participant does not include context to that they think the audience needs to know for their narrative.

Examples:

- Yes: Dear Prince Charming, Cinderella lost her shoe at the ball. This is important because the Fairy Godmother made these shoes to fit Cinderella perfectly.
- No: Dear Prince Charming, I have to tell you about Cinderella. She lost her shoe at the ball.

1st/2nd/3rd Person Point of View:

This column will indicate what point of view the narrative is written in.

Dialogue:

This column indicates how much dialogue a participant uses in their narrative. This needs to be dialogue that is literally written using quotations in the narrative. Everything in Group 2 (Social, written **To** the character) does not count as dialogue.

- **None:** "None" indicates that there was no dialogue in the narrative.
- **Some:** "Some" indicates that there was dialogue in the narrative, but that the narrative did not have a heavy amount of dialogue.

- **A Lot:** "A Lot" indicates that the narrative had a large amount of dialogue or was mostly dialogue.

Examples:

- **None:** I found out that Nemo wasn't there. I shouted his name into the void, but heard no response. I started to panic.
- **Some:** I found out that Nemo wasn't there. I shouted "NEMO" into the void, but heard no response. I started to panic.
- **A lot:** I found out that Nemo wasn't there.

  Dory kept singing "Just keep swimming. Just keep swimming."

  I told her "Be quiet. I think I heard something over there. We need to swim to it."

  But Dory didn't listen to me. She kept singing "Just keep swimming just keep swimming.

Seriousness of Bad News:

Under the "Seriousness of Bad News" column, we indicate how serious the participant believes the news to be in the narrative. The coders judgement about the seriousness of the bad news should not factor in.

- **Not Serious:** This indicates that through the context of the narrative the writer did not perceive the bad news to be serious.
- **Somewhat Serious:** This indicates news that, to the writer, seems a little serious, but that it is not life changing or hugely impactful for the character in the narrative.
- **Very Serious:** Through the narrative's context, this indicates that the writer believes the bad news to be very impactful.
- **Unclear:** This code is used when the writer does not specify the bad news.

Examples:

- **Not Serious:** I had just found out from Nick that my fern died. I mean yeah it isn't great to have the best plant in the world die, but I'm not like heart broken about it. He maybe should have taken better care of it, but I love him anyways.

- **Somewhat Serious:** Wow Nick just told me my fern died. I am a little sad and I definitely cried (only for three days…), but it was already dying I suppose. I hope the fern can live a better life in plant heaven.
- **Very Serious:** I can't believe that Nick just told me that my fern died! He was supposed to take care of it, but I guess the best plant in the world means nothing to him. I will never forgive him.
- **Unclear:** Nick just told me some not so great news. I am definitely feeling down about it.

Transportation:

The category of "Transportation" encompasses how much a narrative can transport the reader into the story. This can be experienced cognitively, emotionally, or imaginatively. This category is coded using a 5-point Likert scale that measures how much the coders were transported when reading each narrative.

Some useful questions to consider when coding this category: How immersive is the text? Do you get swept up in what is happening in the text while you are reading? Is it exciting or emotionally compelling? Do you feel like you are there with the characters/writer while you are reading?

- **1= None**
- **3= Some**
- **5= A Lot**

Quality:

The "Quality" category captures the overall quality of the writing in the narrative. This category is coded using a 5-point Likert scale that rates the overall quality of the writing. This can include things such as, grammar, voice, style, and flow.

Some useful questions to consider when coding this category: How well-written is the text? Is it easy to understand what's going on? How effective is the text at communicating action/mood/ideas/etc? Does the writer seem to be making writing choices deliberately and adeptly?

- **1= Bad**

- **3= Okay**
- **5= Good**

Hope and Sympathy:

The "Hope and Sympathy" column captures how much the narrative continually describes and *"sits in"* the bad news.

- **None:** "None" indicates that the narrative only discusses the negative side of the bad news. There does not seem to be a bright side or a way out of the situation. The narrative is not exploring the space outside of the bad news. A useful metaphor for coding is if the narrative seems to *"sit in"* the bad news then it would be considered "none" for hope and sympathy.
- **A Little:** "A Little" indicates that the narrative included some hope and sympathy. It included lines that commented on the character's strengths or the possible good things to come. It does not just focus on the bad news.
- **A Lot:** "A Lot" indicates that the narrative hardly focuses on the negatives of the bad news. It instead looks to the positive and focuses on good things to come. It seems comforting or focuses on strengths.

Examples:

- **None:** I can't believe that Cece is with another man! I am just… GAH. This is the literal worst. It's my worst nightmare come to life. I am supposed to be with her! Who else is going to buy her mango chutney?? It sure won't be that heathen she's with now. MY life is over. Let me eat my butter in peace.
- **A Little:** I can't believe that Cece is with another man! I am just… GAH. This is the literal worst. It's my worst nightmare come to life, but I mean she does deserve happiness. Maybe he will buy her mango chutney, but for now leave me to be with the pigeons.
- **A Lot:** Dear Schmidt, I know that it must be really hard to see Cece with someone else, but I know you'll find someone amazing. You are witty and so in shape I'm sure another woman will want to date you. If you need anything please let me know. I'll always be here as your friend.

Details:

The "Details" column indicates whether or not the narrative provided details about the situation, the bad news, characters, or other aspects important to the narrative.

- **Yes:** A "Yes" is when a narrative includes any details about the characters, the bad news, or other important aspects. The coder gets a strong sense of what is happening in the narrative. The coder should see an attempt to engage with the source material.

- **No:** A "No" is when there are no details used in the narrative. There is no explanation of characters, setting, the bad news, and other important aspects. It is a generic narrative that could be applied to any source material.

Examples:

- **Yes:** Gideon couldn't believe what Harrowhark was telling her. She never thought that she would get to leave their planet, but with her? How dare she think that she can manipulate her like that. She would refuse to be her cavalier. She would never give up her long sword, especially not for Harrowhark, but she wouldn't stay on this dark planet to whither either.

- **No:** The bad news was terrible. She felt like she could cry. Bad news is never good for anyone.

Action or Drama:

The "Action or Drama" column indicates whether the narrative focuses more on an action sequence or more on emotions and drama.

- **Action:** "Action" indicates that the characters are actively influencing the world around them. The narrative focuses more on actions than feelings. A narrative may be coded as "action" if the narrative sounds similar to a plot synopsis.

- **Drama:** "Drama" indicates that the narrative focuses on the emotions of the characters. It does not focus on actions that the character/s takes, but rather how the character/s is feeling.

Examples:

- **Action:** I slammed my fist into the table after hearing about Pekka. He had already screwed me over once he wasn't going to get away with it again. I grabbed my cloak and strode onto the streets of Ketterdam. I wasn't going to go down without a fight.
- **Drama:** I couldn't believe what I was hearing. Pekka was back? In Ketterdam? He wasn't going to escape this time. I wouldn't give him the chance. I was ready for revenge.

Familiarity with the Character:

The "Familiarity with the Character" column indicates whether or not the coder was familiar with the character referenced in the narrative.

- **Yes:** A "Yes" indicates that the coder is almost definitely familiar with the character referenced in the narrative in any way.
- **No:** A "No" indicates that the coder is almost definitely not familiar with the character referenced in the narrative.
- **Unsure:** "Unsure" indicates that it was hard for the coder to tell from the text whether or not they were familiar with the character in the narrative.

Further Notes:

- All categories should be coded to the best of the coders' ability regardless of the answer to each column.
- A notes column may be included for coders to mark narratives that seem to not fit into the coding sequence or for coders to note their reasoning behind coding difficult narratives a certain way. Coders do not need to write notes for all, most, or even any.

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