Working with a Contractor: Fictional Characters' Scaffolding Role in Self-Construction

by

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A dissertation accepted and approved in partial fulfillment of the

requirements for the degree of

Doctor of Philosophy

in Psychology

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University of Oregon

Summer 2026

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DISSERTATION ABSTRACT

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This dissertation investigates how people actively implicate the self in their experiences of fiction and vice-versa, with the broader goal of clarifying how fiction is used in processes related to self-construction. To this end, I conducted two projects aimed at addressing whether people use familiar fictional stories as points of reference when navigating real-life opportunities for self-construction, and whether people idiosyncratically perceive fictional characters as being more similar to themselves than how other people perceive them, potentially as a strategy for making liked characters more effective tools for self-construction.

Project 1, described in Chapter 2, introduced a novel construct called Narrative Referencing, defined as the propensity to refer to familiar stories in daily life, and created a self-report scale to measure individual differences in this propensity. Narrative Referencing comprises fiction referencing, as well as self-story referencing (related to narrative identity) and social template referencing (related to cultural master narratives and social conformity). All three of these components correlate and contribute meaningfully to a general factor, while also describing unique facets of the overall construct. This project provided evidence that people use fictional stories as a point of reference in real life, and that doing so is related to reflecting on real-life experiences and socio-cultural expectations.

Project 2, described in Chapter 3, was a study that examined whether idiosyncratic perceptions exist of fictional characters' genders, sexual orientations, racial identities, and

neurotypes by comparing how different individuals perceive the same characters. Descriptive patterns showed that people perceive the same character differently from one another. Further analyses using hierarchical linear models and odds ratios showed that participants specifically perceived characters they like more as having sexual orientations and neurotypes (and gender identities, among non-binary individuals) that are more similar to their own than how the modal participant perceived the same characters. Race and binary gender were perceived more consistently across participants. These findings show that people personalize their perceptions of fictional characters in ways that increase self-character similarity, which has been found in other research to enhance processes implicated in self-expansion.

These projects provide evidence that people have active perceptual and self-reflective involvement with aspects of fiction that are implicated in self-construction processes.

ACKNOWLEDGMENTS

I cannot start any other way than by expressing mountains of gratitude to my faculty advisor Dr. Sara Hodges. I entered the program with no expectation that I could possibly pursue something that is as fun as this or that fits my interests so well. But you had every confidence in this topic and in me, so here I am! Thank you enormously for your curiosity, creativity, wit, wisdom, generosity, encouragement, and openness to the eccentric interdisciplinarity of it all. I fear coming across corny here, but genuinely, when I talk about what one should look for in a doctoral advisor, the main thing I do is rattle off a list of your traits and habits. I am very lucky to be your student.

Thank you to my committee members Dr. Rob Chavez, Dr. Bill Swann, and Dr. Beata Stawarska. When I was planning my committee, I wrote a list of your names and thought, "There's no way they will all agree; this would be too cool of a group" — but then you all did, and it really is! Your interest, insight, and jocose incisiveness have expanded and sharpened my thinking tremendously. It has been a privilege to be told I was being neurotic about coding, to sit on broken chairs discussing age-based parasociality, and to become mildly sunburned critiquing homophily with and by you. It has been a privilege in many other ways too of course, but again, I fear corniness.

I would also like to express appreciation for the excellent educators, mentors, coordinators, and peers I have been fortunate to work with at UO. Thank you especially to Lori Olsen, Dr. David Condon, Dr. Sara Weston, Dr. Chanel Meyers, and my labmates Zach, Murat, and Erika. Thank you also to Brinna, Taylor, and Tabby, my fabulous honors students.

Finally, thank you to my parents and to my friends. You know what you've done.

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GENERAL INTRODUCTION

Fiction is a cultural cornerstone, providing entertainment, distraction, comfort, education, and social outlets. People spend a tremendous amount of their leisure time interacting with personae with whom they have no direct contact, including characters in fiction — far more time, in fact, than they spend directly interacting with real people (Gabriel et al., 2016). Huge numbers of people participate in fan activities around fiction like creating and reading fanfiction (stories about characters and settings borrowed from existing fictional media), with one of the largest platforms for sharing and reading fanfiction hosting over 14 million fanworks at time of writing (Elintiriel, 2024). And fiction is accordingly treated as culturally weighty, at least in some ways: For example, access to fiction is now and has historically been highly politicized, with restrictions of books featuring marginalized, stigmatized, or otherwise controversial perspectives being a common strategy for trying to shape population-level attitudes (Goncalves et al., 2024).

Fiction has been a topic of study in psychology, but it has received less attention than might be assumed given its place of prominence in many people's lives. This scarcity of attention was noted (notably) by Raymond Mar and Keith Oatley: "Literary fiction has traditionally been given low priority within psychology" (p. 173). This statement remains broadly true, but psychological research about fiction has expanded considerably since Mar and Oatley's influential 2008 article. The authors' central idea posited in the article, that literary narratives serve as simulations of reality, has been popularly accepted by many psychologists interested in the topic.

Social psychologists like myself have, perhaps unsurprisingly, largely focused on clarifying one of the more social aspects of fiction: audience interaction with fictional characters.

Fictional characters might not be people, exactly, but (using Mar and Oatley's terminology) they are *simulations* of them. As such, they can theoretically provide us with insights into how writers believe people behave, serve as avatars onto which audience members can project themselves so as to immerse themselves more fully into stories, and function as targets for social-like relationships known as *parasocial relationships* (or PSRs: unidirectional relationships in which one individual is familiar with the other, who is not mutually aware of them, Horton & Wohl, 1956). Importantly, fictional characters also typically exist in the context of a narrative: a form of cognitive schema that is extremely influential on psychological functions ranging from information retention (Schank & Abelson, 1995) to truth judgments (Pennington & Hastie, 1986) to identity (McAdams, 1988).

Engagement with fictional characters can be a uniquely rewarding, self-affirming experience. Identification with media characters is associated with higher confidence (Greenwood, 2008). Parasocial interaction (PSI) can meet social and belongingness needs (Derrick et al., 2009; Gabriel et al., 2016) and help people to feel that their actual self is closer to their ideal self (Derrick et al., 2008, Paravati et al., 2021). Prior research has shown that this perceptual shift happens in part because of *self-other overlap* with fictional characters with whom one wishfully identifies (Derrick et al., 2008), which might in turn facilitate *self-expansion*: broadening the self-concept and increasing self-efficacy beliefs (Aron et al., 2022; Phua, 2016).

Researchers continue to investigate the extent to which fiction can influence the self in different contexts. Of particular interest to me is the mechanisms by which exposure to fiction brings about changes to the self — a subject that has received some (often oblique) attention, but has as yet rarely been the direct focus of study. It is therefore my aim in the studies presented

here to advance our understanding of the mechanisms underlying fiction's ability to influence the self. Specifically, my work focuses on the following questions: First, *do people intentionally use fiction to scaffold interpretation and re-interpretation of aspects of their lives?* And second, *which features of fiction facilitate the kind of involvement that is conducive to interpretation and re-interpretation of the self?* I will begin by reviewing bodies of literature that provide insight into how to approach these questions before introducing my research questions more specifically.

Audience Characteristics

Social Desire and Deficits

What might make an individual particularly receptive to fiction? Much of the research into motivations for seeking out fiction has emphasized that it can fill in for deficits in a person's social life. Past work has found that people seek out fiction when they feel lonely, and engaging with fiction does seem to help alleviate that loneliness while bolstering self-esteem-related feelings of belongingness (Derrick et al., 2009; Derrick et al., 2008). People who have experienced trauma commonly seek out fiction, and, depending on the trauma's severity, they often feel better after interacting with favorite pieces of fiction (Gabriel et al., 2017). Indeed, it seems that, during times of large-scale social isolation, entire populations turn to fiction: By some estimates, the average US household spent roughly twice as much time streaming during the first year of the COVID-19 pandemic as during the previous year (Burch, 2020), and book sales that same year increased by about 6% (Kenyon, 2020). One study conducted during the height of the pandemic and social distancing investigated social and parasocial relationships during this time, and found a positive relationship between reduced in-person contact with friends and feelings of closeness with fictional characters and celebrities (Bond, 2021).

Certainly it seems that fiction is a useful tool for "social snacking": indulging in bite-sized socializing to strengthen feelings of belongingness and to regulate social needs (Derrick et al., 2009; Gabriel et al., 2016; Gardner et al., 2005; Hartmann, 2016). Further, individuals who are experiencing more solitude and are looking for avenues of diversion, self-expansion (the acquisition of new perspectives, identities, skills, and resources, as in Aron & Aron, 1986) and loneliness alleviation pursue parasocial interaction more than those not experiencing these types of solitude (Greenwood & Long, 2009). Attachment style predicts parasocial interaction as well, with those individuals highest in avoidance and anxiety being the most involved with fiction (Rain et al., 2017), and each attachment style predicting different qualities of favorite characters in keeping with the general needs and challenges associated with the attachment style (Rain & Mar, 2021). Having less social contact, less education, lower income, more dissatisfaction, and more hopelessness have all been connected with seeking out parasocial relationships with fictional characters and celebrities (Liebers & Schramm, 2019). More specifically, there is some evidence that people with minoritized identities (e.g., sexual minority youth) who lack social contact with others who share their identity seek out support from fictional characters more than people from majority groups do (Bond, 2018). So, it seems that people who are looking for more social contact than they are getting in their day-to-day lives seek out fiction, possibly as a way to fill in gaps in their social needs.

However, while it might be tempting to conclude that parasocial interaction functions as a crutch for people experiencing difficulties in their real relationships and lives more broadly, that is not the full story. The conceptualization of fiction as a compensation tool when socializing with real people is difficult or impossible has been historically popular, but it has not been very robustly supported (Hartmann, 2016). Parasocial relationship intensity correlates positively with

stronger motivations for social companionship and social interaction (Tukachinsky et al., 2020) and higher self-efficacy expectations (Phua, 2016), but these motivations do not necessarily mean that people are pursuing parasocial relationships because they are unable to connect with real people — and even if that *is* why, that is not by any means the only reason people enjoy fiction. Fiction does appear to serve a social function for many people, but people without social deficits also seek out fiction, and parasocial relationships have not been shown to correlate with any kind of social deficits, loneliness, gregariousness, or self-esteem (Tukachinsky et al., 2020). Identification with media characters has also been associated with higher self-confidence (Greenwood, 2008), a stronger sense of belonging (Derrick et al., 2009), and several other qualities that do not have any bearing on ability or inability to connect with real others (see Liebers & Schramm, 2019, for a more complete inventory). Perhaps people high in social motivations and social skills but whose social lives are not completely satisfied by their relationships with real others seek out fiction, and/or perhaps fiction fills a different but related role to social interaction with real people.

Self-Concept Clarity (or Lack Thereof)

What might this other role be that fiction might serve? *Self-concept clarification* seems to be a very plausible possibility. Miall and Kuiken (2002; see also Kuiken et al., 2004) theorize that fiction destabilizes our perspective on and emotions about our lives and shakes us up so that we can recall self-relevant things in new ways. The changes in recall allow us to recontextualize memories and to tell new stories about ourselves, which in turn produces changes in self-understanding. Being more absorbed in a story results in more self-perceptual shifts while reading, especially during more emotionally complex passages (Kuiken et al., 2014). For example, from Oatley (1999):

> The simulations that are novels, plays, movies, and so forth can allow people to find out more about the intimate implications of their emotions. They offer a laboratory space that, relative to real life, is safe and can make the relations of emotions to goals and action easier to understand. [p. 112]

People have been found to be more receptive to fiction when their self-concept is less clear (Johnson et al., 2021; Kaufman & Libby, 2012), perhaps because the moments when our self-concepts are less clear are the moments when we most look to fiction to help us to bring it into focus. Indeed, fiction has been found to evoke a greater number of personal "remindings" in its audience, than non-fiction; that is, fiction calls to mind autobiographical memories, thereby facilitating feelings of immersion into fictional scenes (Larsen & Seilman, 1988; Seilman & Larsen, 1989). Through reading or watching fictional media, we might be reminded of our own lives, our own struggles and hopes and victories, our own emotions. Indeed, people sometimes revisit and reflect on personally meaningful fictional stories for weeks, months, and years after their initial exposure to them (Ott & Slater, 2022). Reflecting on familiar fictional characters in particular has been associated with expansion of the boundaries of the self (Sethi et al., 2022).

To a similar point, Johnson and colleagues (2016) found that, when people feel a strongly affirmed sense of self, they are less moved by stories (Johnson et al., 2016). But when people have something to work through, stories can help: In a different study, Johnson and colleagues (2021) found that threats to self-worth (e.g., cognitive depletion, emotional strain, lack of self-affirmation in stressful situations) causally increase responsiveness to narratives. When self-worth is threatened, fiction might offer an opportunity to escape, and perhaps to engage in self-structuring thought at a level of abstraction that is more comforting than more typical or realistic self-reflective problem-solving. It is possible that fiction affords opportunities to reflect on and

react to thoughts/feelings about oneself in a manner that is less threatening and more fun than having to confront oneself directly *as* oneself. In this way, identifying with fictional characters might be a form of *self-distancing*: introspecting about oneself as if from an external perspective, which has been found to aid in emotion regulation, decrease anxiety, and decrease rumination (Kross et al., 2014).

Fiction might therefore be of particular use to people seeking to change aspects of their self-concept. On the one hand, it can potentially create self-concept uncertainty by prompting people to consider alterative perspectives on their lives. This might be an appealing prospect to individuals pursuing self-exploration and self-expansion. On the other hand, fiction might help to resolve self-concept uncertainty as a tool for *self-verification*: participating in interactions and experiences that affirm self-concept (Swann Jr. & Read, 1981).

Boundary-Blurring[1] Between Self and Other

Self-other overlap describes the inclusion of another in one's own self-concept (or the attribution of one's own qualities in one's conceptualization of another person), and is most common and strongest in close relationships, such as those between spouses or a parent and their child. Aron and colleagues (1991) explain this phenomenon as being a component of the change in resource allocation strategies that come with social closeness, wherein people with close

[1] There is some debate as to whether "blurred boundaries" is an appropriate metaphor, as it implies confusion about where the boundaries around oneself are. An alternative suggested metaphor is that the boundaries around the self become more porous, thereby allowing elements of the other to be adopted into oneself without any confusion about where the boundaries of the self are. Another alternative might be that the self becomes less salient, while the character becomes more salient, implying that the experience of immersion into a character's perspective is related more to attention than to boundaries. I have opted to use the blurred boundary metaphor because I find it to be an apt description of the experience of in-the-moment identification in which the audience becomes so transported into a story that they feel that they themselves are experiencing the character's experience. The degree to which different metaphors are appropriate to different styles of connections with characters could be an interesting direction for future study.

interpersonal bonds also tend to share with each other, as well as being related to allyship between close friends, partners, and family members.

Although self-other overlap has traditionally been studied in relationships between real people, there is also converging evidence to indicate that people experience self-other overlap with fictional characters: Sestir and Green (2010) measured self-other overlap between people and fictional characters (presented in video) with a Me/Not-Me reaction time measure established for use in measuring self-other overlap between real people. The study's results indicate that watching a television show or movie can cause the main character to become part of one's own self-concept and/or that one begins to project one's own traits onto the main character.

A study conducted by Shedlosky-Shoemaker and colleagues (2014) also found self-other overlap with fictional characters, and compared it to the self-other overlap experienced in relationships between real people. Specifically, they investigated the self-other overlap that participants experienced with their close friends and acquaintances, as well as with a favorite fictional character and an unfamiliar fictional character. As expected, they found greater self-other overlap with the close friend than with the acquaintance. They also found that people experienced greater self-other overlap with a favorite character than with the new, unfamiliar character. Interestingly, more self-other overlap was found with favorite characters than with a real acquaintance, which suggests that favorite fictional characters might not be as self-relevant as real close friends, but they are more self-relevant than other real people from one's life. It should also be noted that this pattern was found in a sample of undergraduate students who were not prescreened for having a particularly strong interest in fiction: Individuals who are more invested in fiction might find favorite characters to be as or nearly as self-relevant as close friends.

Interestingly, Shedlosky-Shoemaker and colleagues' findings are similar in some ways to research on the self-other overlap people experience with God, in which more strongly religious people report more overlap with God and describe God using more of the words they used to describe themselves than less religious people used (Hodges et al., 2013). This was true both of individuals who were more conservatively religious, and, independently, of individuals who reported greater awareness of God, indicating that people who think about God more experience greater overlap with God. While it is unlikely that most fans have a religious or even pseudo-religious relationship with their favorite fictional characters, it nonetheless seems plausible that, the more involved a character is in their day-to-day mental life, the more that character might become a part of them, similar to how thinking about God more is related to feeling greater overlap with and similarity to God.

A recent study (Broom et al., 2021) investigated neural representations of fictional characters from *Game of Thrones* through fMRI and found results supporting this idea. The researchers were particularly interested in activity in the ventro-medial prefrontal cortex (vMPFC) region of the brain, which is activated when thinking about the self, as well as when thinking about people to whom one is especially close (but *not* people to whom one is *not* very close, like acquaintances). This study found that the vMPFC was more activated when fans of *Game of Thrones* thought about characters they had stronger attachments to, and was less activated when they thought about characters they were less attached to. The region was not as activated for favored characters as it was for close real friends, but more than for real acquaintances. So, overall, it seems that, within the brain, fictional characters are self-relevant in a way that is similar to friendship.

Taken together, the work by Sestir and Green (2010), Shedlosky-Shoemaker and colleagues (2014), and Broom and colleagues (2021) provide evidence that people experience self-other overlap with fictional characters that functions similarly to self-other overlap with real people.[2] While self-other overlap is not a particularly popular term used in investigating relationships with fictional characters, the construct is very closely related to *identification*: a central multidisciplinary construct in the study of responses to fiction. The term 'identification' has a number of definitions: It can mean that an individual's sense of self temporarily dissolves such that they "become" the character (Cohen, 2001), that they adopt the attitudes and values of the character, or that the identifier seeks out common ground with the character (for comprehensive reviews of theories of identification, see Brown, 2015, and Van Krieken et al., 2017). Most definitions involve someone entering into a character's perspective such that they experience the narrative through that character. Essentially, when a person identifies with a fictional character, they experience the character as an extension of themself, the character's emotions more or less as their own. They might stop attending to who they are in reality while involved in the narrative in which the character is embedded. Identification with characters underlies some of the most significant experiences people have with fiction. It has been found to be associated with greater enjoyment of a film (Hall, 2019); greater propensity to be persuaded

[2] I would like to expand parenthetically on the findings across numerous studies that self-other overlap is somewhat weaker with fictional characters than with real people. Because deeper immersion into fiction as well as the character's relevance to the self predicts stronger self-other overlap, I would suggest that the disparities between self-other overlap experienced with real and fictional others are due more to fictional characters seeming less real and less important than real others do, and not because of any categorical difference in how real and imagined people are sociocognitively represented. This is in keeping with Aron and colleagues' (1991) conceptualization of self-other overlap as being beneficial for resource allocation: We do not share resources with characters from fictional media and they do not share with us, so we do not typically have the opportunity to bond with fictional characters on the terms that would lead to self-other overlap that would be comparable to how we experience it with friends, partners, and family members. I would predict that people with especially strong bonds with fictional characters, however, might experience self-other overlap with their fictional favorite that would be as intense as they experience it with real others with whom they are close. Research on participants in fan communities, for example, might help to clarify the limits of self-other overlap with fictional characters.

by a text (Cohen, 2001); and greater affective impact, more cognitive elaboration, more complex reflective processes while viewing, and more impact of the film's message on attitudes and beliefs (Igartua, 2010).

Brown (2015) describes a theoretical process by which people become involved with fictional characters as beginning with fairly easy-to-access qualities of characters like similarity between themselves and the audience (homophily), which can develop into parasocial relationships, which can lead to identification; and, in turn, worship (for the full model, see Brown, 2015). So, when people develop attachments to fictional characters, it is often not only because they think of the character as a friend, but also because the character holds the potential to be someone the audience can identify with. This speaks to a difference between interactions with real people and with fictional characters: When interacting with a fictional character, there is no other person who exists physically separate from oneself; they cannot come into direct conflict with us by insulting us, stealing from us, starting rumors about us, or by telling us that we have them all wrong, that they are *not* the way we construed them. Experiencing a connection with a fictional other is, I suggest, simultaneously a unidirectional interaction with a distinct other person, and an opportunity to step into the character, to project onto them and see the world through them — to temporarily *become* them.

Identification can therefore be regarded as a type of the simulation described by Mar and Oatley in *The Function of Fiction* […] (2008). Identifying with a fictional character allows an individual to simulate the experience of being that character: having the character's identity, attitudes, social relations, and experiences. This process can, in theory, facilitate self-verification, if the character shares aspects of one's self-concept that have been destabilized; improved self-esteem, if the character makes one feel more like one's ideal self; and self-expansion more

broadly, if the character differs from the self in some compelling ways, be they positive, negative, or neutral (identification might also facilitate more emotional experiences like catharsis, e.g., Janicke & Raney, 2015).

The close connection between identification and *narrative transportation* (that is, the experience of being pulled into a narrative) underscores the experience-simulation aspect of identification. If a person is not transported into a narrative/fictional world, they are less likely to make the emotional connection to invest in the characters enough to be moved by them. Transportation is key to forming relationships with characters: Transportation leads to greater identification with characters (Brown, 2015; Felnhofer et al., 2022), as well as self-other overlap, and self-expansion (Green et al., 2004; Shedlosky-Shoemaker et al., 2014), stronger parasocial interaction/relationships (Erickson et al., 2019; Liebers & Schramm, 2019), and more self-perceptual shifts while reading, especially during more emotionally complex moments in a piece of writing (Kuiken et al., 2014). Conversely, attachment to and identification with fictional characters strengthens interest, so parasocial interaction and identification likewise contribute to transportation into fictional narratives as well (Hartmann & Goldhoorn, 2011; Kaufman & Libby, 2012; Klimmt et al., 2006).

Self-Construction and Wishful Identification

Why would identifying with fictional characters be associated with positive feelings? Potentially because people often favor and identify with characters they admire: Similarity to one's *actual* self and similarity to one's *ideal* self often go hand in hand when it comes to character favoritism (Hoffner, 1996; Hoffner & Buchanan, 2005; Shedlosky-Shoemaker et al., 2014). Perceived similarity between oneself and a character, as well as character attractiveness, predict *wishful identification*. Wishful identification is part of the impulse toward self-expansion:

Identifying with a person or character one wishes to resemble provides an opportunity to slip temporarily into feeling as if one is like that desirable other.

Identification and wishful identification can impact the self in meaningful ways. In one study by Derrick, Gabriel, and Tippin (2008), parasocial relationships were shown to decrease the perceived distance between one's actual and ideal selves. The study by Derrick and colleagues investigated only parasocial relationships with celebrities, not fictional characters, but another study found that engaging in any kind of non-traditional social strategy, including parasocial relationships with celebrities or fictional characters, in conjunction with traditional social strategies was associated with more positive self-perception than using only traditional social strategies (Paravati et al., 2021). Similarly, seeing images of a muscular superhero with whom men had a parasocial relationship positively boosted their self-image, and even increased their grip strength temporarily (Young et al., 2013; similar results were found between women and favored thin female celebrities; Young et al., 2012). More broadly, readers' perceptions of their own traits change while reading short stories (Kuiken et al., 2014): For example, reading excerpts from teen vampire series *Twilight* or young adult witch and wizard series *Harry Potter* caused participants to feel more vampiric or magical, respectively (Gabriel & Young, 2011), suggesting that people assimilate their self-concepts into narratives during and at least shortly after reading.

Numerous scholars have put forward the idea that engagement with fiction might guide *self-construction*-related processes. The notion that the self is partially constructed goes back at least to William James and has carried through psychological research and theory since. For example, Swann and Buhrmester (2012) suggest that, while we do have consistent access to our own subjective experience in real time, much of the work we do to make the past, present, and

future coherent comes from often-inaccurate memories and introspections that require assembly (for a more thorough explanation of this approach to the self, see Swann & Buhrmester, 2012). With regards to fiction's role in self-construction specifically, the theory of temporarily expanded boundaries of the self (TEBOTS) suggests that self-expansion is one of the main underlying motivations for engaging with stories (Slater et al., 2014). Similarly, Green and colleagues (2004) posited that identity play and self-expansion are vital components in the experience of identification.

Existing research indicates that some consumers of fictional media do, to at least some extent, consciously reflect on fictional characters to structure decision-making in real-life contexts. One study investigating the connection between various responses people can have toward fictional characters found that perceived similarity and parasocial interaction predict self-reported efforts to be more like the admired character, suggesting that, when a fictional character becomes a role model, it is because the character is already somewhat similar to the person who admires them (Tian & Hoffner, 2010). To a similar point, Hoffner and Buchanan (2005) found that young adults generally aspire to be like characters who resemble them in race and sex, but who are also older than themselves — perhaps because older characters give them a goal and/or life stage to work toward. They also found that similarity in general attitudes (e.g., whether the viewer/reader feels that the character thinks and behaves similarly to how they do) was a strong predictor of wishful identification.

I suggest, following from these ideas, that a character with whom an individual identifies is perhaps similar to a *possible self*: a projected version of oneself in the future that might be feared or hoped for, which can influence one's behavior depending on how congruent or incongruent that character seems with one's present working self-concept (Hoyle & Sherrill,

2006; Markus & Nurius, 1986; Oyserman, 2015; Oyserman & James, 2012). Often, the characteristics of an individual's main possible selves reflect the most salient aspects of the individual's life in a given moment (Oyserman et al., 2004). Although fictional characters are ostensibly separate "people" from us, we seem to focus most on those characters that reflect aspects of ourselves that we find personally relevant. In a parallel manner, future selves are also often experienced as being different people from present selves (Hershfield, 2011). Identifying with fictional characters might be a way for people to give more shape, so to speak, to their conceptualization of some of their possible and future selves.

Self-Similarity and Self-Relevance

As previously mentioned, *similarity* strongly influences the degree to which people like and connect with fictional characters. Perceived similarity between a character and oneself on factors such as personality traits and living situation (e.g., college students living independently vs. with parents) has been shown to correlate positively with character preference, identification, transportation, and narrative persuasiveness (e.g., De Graaf, 2014; Rarity et al., 2022; Tian & Hoffner, 2010). For example, changing a character's appearance in a video game (known as "skinning") to look like the player also enhanced identification: Skinning the character to look more similar to the player mediated the positive relationship between violent video game play and self-reported aggressive behavior in general (Williams, 2010), which suggests that similarity and identification with characters might influence people to emulate their fictional video game behavior in their real-world behavior. When people are able to see themselves in a piece of fictional media, they feel more involved with the character who is, in a sense, representing them.

A study conducted by Tian and Hoffner (2010) of fans of the contemporary popular television show *Lost* found that perceived similarity predicted identification; perceived similarity

and identification both predicted parasocial interaction (even when controlling for demographics and character type); and more parasocial interaction was correlated with liking the character more. Perceived similarity was left fairly open to participants' interpretations: similarity was measured with a handful of items including "The character reminds me of myself," and "I seem to have the same beliefs and attitudes as the character." This allowed participants to report their feelings of homophily based on whatever their own personal criteria were, rather than imposing the need to relate to characters on the basis of demographic characteristics, specific personality traits, or life trajectory. These results provide an overview of how people relate to their favorite fictional characters: Perceiving a character as similar to oneself increases the likelihood that one will also begin to see the character both as a friend and as a mirror of oneself through identification.

The aforementioned study establishes the importance of *perceiving* similarity between self and character without clarifying either whether those similarities are observable or which qualities the perceived similarities rest upon. Other work has addressed the specifics of perceived similarity without finding a conclusive answer. Evidence from a study by Ooms et al. (2019) shows that perceived similarity matters more than age- and gender-based actual similarity in predicting identification, transportation, and the persuasive power of a story to change behavior. By contrast, though, a different study found that identification is higher when there is more transportation but is unaffected by perceived similarity to self (Shedlosky-Shoemaker et al., 2014), suggesting again that perceived similarity may not be a critical ingredient for identification.

The apparent contradictions in the evidence on the importance of actual versus perceived similarity between self and character in these two studies could perhaps be due to

methodological differences: Whereas Shedlosky-Shoemaker and colleagues' study found no support for perceived similarity' importance using a global single-item measure of similarity, Ooms and colleagues' study used a larger pool items (e.g., "X thinks like me / behaves like me / is similar to me / has social status like mine / has background similar to mine," Ooms et al., 2019, p. 7) and *did* find perceived similarity to be important. The previously mentioned study on character homophily among fans of *Lost* (Tian & Hoffner, 2010) likewise used more items to examine perceived self-character similarity on numerous features like beliefs and attitudes. A single item about overall similarity might call to mind the many ways one does *not* resemble a given character (in terms of e.g., demographic features, participation in extraordinary circumstances, cultural environment), whereas scales addressing attitudes and other more internal aspects of self might encourage respondents to look past superficial features to find self-character similarities.

I suggest that research focusing on characters' demographic features might yield ambiguous results for the same reason. Cohen and colleagues (2018), for example, found that whether or not a new, unfamiliar character shared a person's nationality, sex, age, or city of residence had no influence on identification, enjoyment, or perceived similarity between the person and the main character of a short fictional narrative. Hoeken and colleagues (2016) found that sharing a course of university study with a fictional character influenced the extent to which students identified with the character and perceived similarities between themselves and the character, but that story perspective (i.e., which character was narrating) had a stronger effect on identification than college major. Kaufman and Libby (2012) found that main characters belonging to a demographic outgroup (e.g., race- or sexual orientation-based) inhibited readers' experience-taking with the character when the character's outgroup status was introduced into

the narrative early. However, when outgroup status was introduced after the reader had already gotten to know the character, dissimilarity on a demographic feature did *not* inhibit experience taking. All of these studies suggest that connecting with a character's interiority is of key importance to identification, whereas demographic features are not particularly meaningful in their own right except, perhaps, if they inhibit one's willingness to connect with a character belonging to an outgroup.

Demographic features might at times be confounded with more personally profound similarities. For instance, most people's established favorite characters are of the same gender and race as themselves (Hoffner, 1996; Hoffner & Buchanan, 2005). However, an investigation of gender's role in preferences for fictional characters revealed that people identify more with gendered behavior than with character gender itself (Jose, 1989). A masculine man might identify more with a fictional woman who behaves in line with cultural expectations of masculinity than he would identify with a stereotypically feminine fictional man. This suggests that character gender is less important than similarity in gendered behavior and values when it comes to connecting with characters.

Relatedly, Bond (2018) found that gay, lesbian, and bisexual adolescents are more likely to have favorite characters of a different gender from themselves than their straight peers are, and to favor queer characters. Further, participants were more likely to develop parasocial relationships with characters whom they perceived as more similar to themselves on other attributes (as well as those to whom they were more regularly exposed and whom they saw as

attractive). Perhaps for sexual minority teens, queerness, attitudes, and personality are more salient identity characteristics than gender.[3]

Moral attitudes have, like demographic features, been the focus of substantial research on identification with fictional characters. I consider the results from this area of investigation to support my claim that importance of similarity — actual or perceived — comes down to whether the features being investigated feel core to the media consumer's sense of self. Although people generally prefer characters who are morally praiseworthy (Krakowiak & Oliver, 2012) whose choices they find justifiable (Cohen et al., 2015), the popularity of antiheroes — the main characters who are good in some ways and bad in others — suggests that unimpeachable virtuousness is not necessarily the only (or even main) aspect of character morality that drives media consumers' preferences. Indeed, even full-on villains are not uniformly disliked. There is a small but consistent body of evidence showing that that individuals higher in antagonistic personality traits (Kay & Arrow, 2022; also known as the Dark Tetrad, Chabrol et al., 2009; Paulhus & Williams, 2002) are more inclined to favor, admire, and feel similar to antiheroes and villains than are individuals lower in these traits (Black et al., 2019; Davis, 2015; Doyle et al., 2025; Greenwood et al., 2021; Snyder et al., 2019). Perhaps people who disagree with mainstream moral views for other reasons might feel that antiheroic and villainous characters reflect themselves more than heroic characters do as well. Further, antagonistic traits notwithstanding, people tend to like those villains whose characteristics are most similar to their own (Krause & Rucker, 2020).

[3] These results could also potentially reflect an underlying tendency for sexual minorities to experience gender in less binary — or at least less stereotypical — ways than heterosexuals do, which might play a role in favorite character selection.

The experience of engaging with antihero (and some villain) narratives also speaks to deep connections with those characters, beyond traits and values. Antihero narratives tend to include something horrible happening to the antihero, which, in moral disengagement theory, justifies the antihero's violent or otherwise problematic behavior (Janicke & Raney, 2015). Audiences who wish they could engage in self-destructive behaviors or retaliate against others without consequence (but cannot) appreciate the catharsis of witnessing a character whom they identify with acting out. This is particularly true and effective when the character feels like a real person: Imperfect characters are more well liked when they seem realistic, behave like real people, and might therefore be easier to relate to than, for example, a cartoonishly evil supervillain (Konijn & Hoorn, 2005; Krakowiak & Oliver, 2012).

I propose that the evidence from research on self-character similarity, homophily, and identification collectively suggests that people connect more with characters to whom they themselves feel similar. I also, however, suggest that perhaps the types of similarities that matter most are more related to people's experiences of themselves than to what is most superficially salient about them to others. Nationality, sex, or age might not feature as prominently in people's experiences of themselves as do other features that impact their day-to-day life more, such as their social roles, choices, or personality. These deeper personal characteristics seem to matter more in people's connections with fictional characters.

However, perfect self-character overlap seems unlikely to be the ideal way to connect with fictional characters as tools for self-concept navigation. As I have discussed in previous sections, characters who resemble the *ideal* self might be preferred to characters who resemble the *actual* self. More to the point, a character that perfectly reflects oneself has little to offer when it comes to self-expansion and related processes (e.g., self-exploration, self-construction,

identity development). As such, I would describe similarity and self-relevance of characters as a point of access to them, but differences between self and character as the drivers of self-expansion.

The Present Work

In summary, the literature reviewed indicates that engagement with fiction can be particularly meaningful when an individual is experiencing a lack of self-concept clarity and/or has social belongingness needs that are not being met in their immediate environment (whether because of externally imposed isolation or because of self-related differences between the individuals identity or experiences and the identities/experiences of the people around them). Because fiction acts as a simulation of real situations, it can allow people opportunities to meet some social needs and to try out novel thoughts, feelings, behaviors, and self-perceptions in a private, exploratory space. Self-other overlap with fictional characters seems to be related to engagement in fiction: When an individual connects with a character, they experience some blurring of the boundaries between themselves and the character, which would at least theoretically allow for greater immersion into the simulation that fiction presents. I posit that gaps in belongingness and self-concept clarity make people more open to this kind of exploratory simulation, since such individuals might be less connected to or sure of their real-life circumstances than others. That said, some connection between real life and fiction seems to be necessary, since similarity between self and character predicts liking, identification, and parasocial attachment. However, I suggest that, once an initial similar-based connection is established, the overlap between self and character allows the character to serve as an avatar for the exploration that the fictional story affords, thereby facilitating some expansion of self-concept founded on the assumption of meaningful but not perfect similarity.

Some of the connections between past areas of research are speculative; nonetheless, this outline seems to me like a plausible and reasonably well-supported explanation for how self-concept change might come about during exposure to fictional media: An individual finds a character they find relatable in some way, then uses ways that the character diverges from the self to investigate ways of filling in gaps in their own self-concept that they wish to explore. Importantly, though, most of this framework focuses on self-concept exploration *during exposure* to fictional stories, while past research demonstrating that self-concept change through fiction can occur often does so with evidence that shifts to confidence, self-efficacy beliefs, belongingness, and so on persist after the story has ended.

While it is theoretically possible that the self-exploration that occurs concurrently with watching/reading a piece of fictional media is the only meaningful self-exploration that occurs around fiction, it seems unlikely, given the work showing that people reflect on fiction that they found meaningful after the story has ended, sometimes revisiting their memories of the characters and stories for years after initial exposure. This kind of post-exposure reflection is known as *retrospective imaginative involvement* (RII): the propensity of some fictional media consumers to continue to think about stories consciously and creatively with stories even after the story is over. The Dynamic-RII is an instrument that measures the propensity to recall the narrative once it has ended, and to imagine such counterfactual changes to elements of the narrative as what might happen if the events of the story had turned out differently (Baldwin et al., 2020, and Sethi et al., 2020, as cited in Ulusoy et al., 2022). However, measures of retrospective imaginative involvement do not address whether these imaginings have any bearing on the imaginer's own life — although some work has shown that fans of fictional media do

engage in retrospective imaginative involvement during times of uncertainty in their own lives (Ott & Slater, 2022).

Revisiting a question that I posed at the outset of this literature review, then: *Do people intentionally use fiction to scaffold interpretation and re-interpretation of aspects of their lives?* From past work, it seems that they do. However, a more specific question remains: ***When people are facing uncertainty about their real lives, do they refer to familiar fictional stories to help them to navigate the uncertainty?*** To answer this question, I introduce a construct I am calling *narrative referencing* (the conscious propensity to refer to familiar stories in daily life), which I describe further and operationalize in Project 1.

While my research question defined here addresses the propensity to reference fictional stories specifically, narrative referencing encompasses a wider range of types of stories including stories from one's own real-life experiences, stories about other people's lives, and cultural master narratives. This is because I suspect that remembering past stories from one's own life and from one's simulated experiences while immersed in fictional media are similar in many ways — a suspicion supported by the finding that people also use vicarious memories — stories about the lived experiences of others — similarly to the ways in which they used autobiographical memories to understand themselves, others, and new situations (Pillemer et al., 2024). It is also the case that cultural master narratives are often communicated through fiction (a notion that has sparked many a debate about whether watching old Disney films is a beneficial way of instilling traditional values in children, or a harmful way of enforcing regressive thinking in new generations, for example), so fiction might offer a new direct strategy for studying individual interaction with cultural master narratives. If this is true, then researchers studying narrative and cultural identity should perhaps devote more attention to how people engage with

fictional stories that have particularly strong personal meaning. Creating a construct and measurement tool that encompasses self-stories, stories about others, and cultural stories in addition to fictional stories seems to me to be theoretically justified, and potentially more interesting if it seems to be the case that use of these different types of stories is indeed similar.

Regardless of whether people relate fiction to their real lives asynchronously or only while immersed in a story that is actively unfolding, the second question I initially posed remains relevant: *Which features of fiction facilitate the kind of involvement that is conducive to interpretation and re-interpretation of the self?* As discussed, it seems from prior research that similarity of characters to the self on personally salient features is a big part of the answer. However, there is a potential discrepancy worth investigating between the body of research showing the importance of self-character similarity and the body of research showing that people whose belongingness needs are not being met in real life often use fiction to meet those needs. While these two findings do not necessarily contradict one another, there are some cases in which they are difficult to reconcile: namely, when an individual's belongingness needs are not being met because the individual is minoritized on some feature that is also underrepresented in fictional media.

For instance, LGB adolescents have been shown to rely on fictional characters more for advice than on real people, particularly when they do not have many/any real LGB people in their real-life social circles (Bond, 2018) — but it is also well-documented that queer characters are underrepresented in fictional media (GLAAD Media, 2025). Since queerness seems in this situation to be a core aspect of self that LGB adolescents are looking to see reflected in others, we might expect these adolescents to be seeking out queer fictional characters (which, in the study by Bond (2018), they were indeed more likely to do than their heterosexual peers). But if

there are fewer-than-would-be-proportionate queer fictional characters available, why are these adolescents seeking out fictional characters over real people — particularly since some other work has found that queer media representation is often unsatisfying to queer audiences (Shafee, 2021)?

This is a specific example but it might potentially apply to a range of self and character qualities that are underrepresented both in real life and in fiction. While it is probably fairly easy to find a fictional character who reflects a few core aspects of oneself, it is certainly rarer to find characters who reflect most or all of the features that would most meaningfully facilitate immersion in the character's perspective. This raises the research question that I pursue in Project 2: ***What do people do when a fictional character is similar to the self on some features, but a core aspect of the self that is relevant to identification and self-concept exploration is not shared with the character?***

To answer this, I propose that self-other overlap likely goes both ways: People take on some aspects of fictional characters (leading to possible self-concept change, as discussed) *and* project some aspects of themselves onto fictional characters. In this way, audiences are not only passive consumers of fiction, but can be involved in the active, imaginative process of creating existing characters partially in their own image. This projection would not necessarily lead to self-concept change, but it might make characters more effective tools for navigating uncertainty or identity construction in the right conditions.

My goal is to contribute to the clarification of two possible mechanisms by which people actively enlist fiction to construct aspects of the self: by using fiction as a reference point to navigate real-life uncertainties, and by honing perceptions of fictional characters to make them more personally useful tools for self-expansion.

CHAPTER 2: NARRATIVE REFERENCING

Narratives are powerful tools for structuring information and making meaning (Pennington & Hastie, 1986; Schank & Abelson, 1995). The field of psychology often addresses narratives in the context of well-being, and for good reason: Both whether and how people think of their life experiences in story form can have important impacts on mental health outcomes, such that the construction and interpretation of narratives about the self is a popular and effective part of therapeutic intervention (e.g., Boritz et al., 2014; Goodcase & Love, 2017; Raeder et al., 2023; Yanos et al., 2011). Narrative psychology is not limited to clinical research, though: People commonly conceptualize of their own lives and events therein as stories across contexts (Archibald, 2008; Bluck & Habermas, 2000; Kovach, 2009; McAdams, 1988, 2008, 2018; Mehl-Madrona, 1997; Rogers et al., 2023).

But *how* do people devise the stories that help them to make sense of their own experiences? I propose that individuals draw on stories that are already familiar to them when interpreting their own lives. Much like fiction writers look to existing stories for inspiration, people notice similarities between their current experiences and narratives that are familiar to them (e.g., stories told to them by others, already-narrativized personal experiences) and overlay the structures of those stories onto present circumstances. Through this process, familiar stories can facilitate meaning-making, helping people to contextualize their experiences, interpret ambiguity, and make decisions during moments of uncertainty. In the following sections, I briefly review several disparate areas of research, including narrative identity, cultural master narratives, and identification with fiction, drawing connections between them to situate my contribution: a novel construct describing how people draw on existing stories to make sense of daily life, and a psychometric tool to measure it.

Narrative Identity

Narrative identity is the internalized and evolving story of the self that integrates past, present, and future experiences and self-perceptions to provide a sense of coherence and meaning to the self (McAdams, 1993, 2013, 2021). Many people have many small episode-like stories about some events in their lives, but those might or might not come together to form a bigger, more all-encompassing life story (McAdams, 2018). However, even when they are not inclined to do so unprompted, many people nonetheless *can* construct an overarching life story that includes an overarching story with evolving plotlines related to different facets of one's life and social connections (Bluck & Habermas, 2000; McAdams, 2021).

However, individuals differ in the propensity and ability to construct a coherent life narrative. Factors that influence the development of a unified life story narrative include being older in more individualistic societies or having a higher social status (Akers & Saucier, 2019) and autobiographical memory, which itself varies across individuals (Holm & Thomsen, 2018). Autobiographical memory — often conceptualized in narrative terms (Bluck & Habermas, 2000) — serves identity-relevant functions such as supporting self-continuity, maintaining social bonds, and guiding future behavior (Bluck et al., 2005; Harris et al., 2014; Lind et al., 2019). Unsurprisingly, differences in capacity to construct and revise a life story can have important implications for well-being. Constructing a coherent life story can increase perceived meaning in life by reducing the sense that life events are random or chaotic (Costanza et al., 2019; McAdams, 1988) — an important effect, as meaning in life is a protective factor against suicidal ideation and behavior (Costanza et al., 2019). The tonal aspects of life story narratives are important to consider beyond the mere fact of a life story narrative existing: Positive meaning-making has been linked to greater life satisfaction, whereas negative narrative connections are

associated with depression, anxiety, and lower well-being (Lilgendahl & McLean, 2020). Moreover, the thematic features of narrative identity (e.g., agency, redemption, or contamination) predict mental health outcomes across both healthy populations and individuals who recently received a major physical illness diagnosis (Adler et al., 2015).

In addition to reinterpreting the past, it is also possible to evaluate one's own "characterization" and behave accordingly. Possible future versions of oneself that feel connected to the current self are more likely to prompt self-regulatory effort and concrete planning to achieve those future identities than are possible selves that feel more removed from the present self (Oyserman & James, 2012), and identity-congruent challenges are perceived as more meaningful and worthwhile than identity-incongruent ones (Oyserman, 2015). Further, vividly mentally simulating positive future events has been found to increase behavioral intentions, suggesting that connecting present actions to anticipated outcomes strengthens motivation (Hallford et al., 2022).

Collectively, the research on narrative identity and possible selves suggests that people evaluate potential actions partly in terms of whether they fit their evolving sense of who they are (likely developed through autobiographical memory referencing; see Escalas, 2007) and who they aim to become: Present self-understanding informs anticipated future identity, and both together shape behavior. In narrative terms, people seem to evaluate the stories of their lives to determine how to steer the plot going forward. However, while several measures exist to capture differences in individuals' propensity to think of their lives as narratives (e.g., the Awareness of Narrative Identity Questionnaire or ANIQ, see Hallford & Mellor, 2017; the Narrative Identity Self-Evaluation Scale or NISE, see Lind et al., 2025; the Self-Concept Clarity Scale, see Campbell et al., 1996; and the Thinking About Life Experiences scale or TALE, see Bluck &

Alea, 2011), no tools have yet been developed to measure the future-oriented process of referring back to an already-constructed self-story for the purpose of building narrative connections between the past and future self.

Cultural Master Narratives

Cultural master narratives describe and prescribe culturally shared expectations about how lives are typically and ideally lived. McLean and Syed (2016) characterize master narratives as culturally ubiquitous, compulsory, rigid, and often invisible to those who conform to them. They contain information about societal goals, values, and life course expectations, thereby providing an implicit scaffold for identity development.

Use of master narratives to guide one's own life course bears some theoretical similarities to *vicarious memory*: the process of incorporating others' recollections into one's own autobiographical understanding, such that events one did not personally experience nonetheless inform one's approach to situations (Kierkegaard Thomsen et al., 2025; Pillemer et al., 2024). Master narratives serve as culturally shared "memories" of how lives unfold, supplying ready-made templates for life course development built from the aggregated experiences of many others that one might draw upon vicariously to guide one's choices and expectations.

Although master narratives are, as mentioned, often invisible to those whose lives align with them, they often become more consciously salient when one's own experiences diverge from them. Individuals who are marginalized, minoritized, or otherwise excluded from dominant life scripts tend to be more aware of the master narrative and their distance from it (McLean et al., 2018). For example, cisnormative gender expectations embedded in many cultural master narratives fail to account for transgender experiences, making the master narrative's boundaries especially visible to those whose identities fall outside them (Bradford & Syed, 2019).

When divergence is shared by many individuals, *alternative narratives* emerge: story templates describing experiences that depart from the dominant narrative in some consistent way (McLean & Syed, 2016). These alternative narratives, like master narratives, are shaped by the common lived experiences. Notably, shared memory of relevant historical events can also contribute to collective identity formation among groups that diverge from cultural norms. For example, many LGBTQ+ individuals identify events such as the 1969 Stonewall protests or the 2015 legalization of same-sex marriage in the United States as central to group narrative identity (Weststrate & McLean, 2022).

Whether dominant or alternative, these cultural narratives provide ready-made plot structures against which individuals can interpret their own lives, evaluate whether they are on track for a good life, and use to guide future action. There appears to be variability in how aware people are of comparing their experiences to these broader storylines. This variability parallels individual differences in narrative identity development and raises the possibility that people differ not only in the stories they tell about themselves, but in the extent to which they actively draw upon culturally available narratives to make sense of their lives. To my knowledge, awareness of cultural master or alternative narratives is measured exclusively qualitatively; no measures exist (that I have found) that measure master narrative awareness in quantitative self-report form.

Identification with and Projection onto Fictional Narratives

Engagement with fiction is popularly conceptualized among psychologists as a simulation of the real social world: People interact with fictional stories to experience situations and identities that are personally resonant, but that offer a compelling departure from their current reality that allow for catharsis, experimentation, and self-reflection. Mar and Oatley

(2008) influentially proposed that fiction provides opportunities for individuals to vicariously experience social and emotional situations in a low-risk way without directly living them. Similarly, Dill-Shackleford and colleagues (2016) suggest that audiences often "feel through" fictional characters, self-referencing and processing personal information as stories activate connections to their own lives.

Because fictional stories are typically more deliberatively structured to convey more direct messages than real life is, they can provide scaffolding for individuals to interpret their own internal and external experiences. Prior work has found that fictional narratives evoke "personal remindings" in audiences that often prompt reflection on and re-interpertation of past life events (Kuiken et al., 2014; Larsen & Seilman, 1988; Seilman & Larsen, 1989). Narratives have been found to be effective persuasive tools capable of shifting beliefs and behavior (e.g., Devine et al., 2012; Green & Brock, 2000; Johnson, 2013; Johnson et al., 2014; Moyer-Gusé et al., 2019; Schiappa et al., 2005), providing evidence that stories affect people's real-life worldviews. More broadly, numerous scholars have put forward the idea that engagement with fiction might guide self-construction-related processes. For example, the theory of temporarily expanded boundaries of the self (TEBOTS) suggests that self-expansion is one of the main underlying motivations for engaging with stories (Slater et al., 2014). Green and colleagues (2004) posited that identity play and self-expansion are vital components in the experience of identification.

Importantly, active involvement with fiction can persist even after the story concludes; fiction's impact on one's life is not limited strictly to whatever its effects were during exposure, as people sometimes continue thinking about stories after they have ended. Continuing to engage with elements of a story even after the story is over is referred to as Retrospective Imaginative

Involvement (RII), and can include imagining alternative outcomes, extending storylines, or reflecting on characters and themes in relation to one's own life (Ott & Slater, 2022; Ulusoy et al., 2022). Longitudinal evidence has shown that such continued engagement can sustain a narrative's perceived personal impact over time (Ott & Slater, 2022). Moreover, RII is associated with self-expansion and need for cognition (Ulusoy et al., 2022). These findings suggest that, for some individuals, fictional narratives can become integrated into personal reflection and meaning-making processes.

Fiction provides ready-made plots, character arcs, and themes that may serve as templates for understanding real-world experiences (seeing oneself in the Hero's Journey — a narrative structure common to many myths and fictional stories — increases meaning in life: see Rogers et al., 2023). While such integration can occur outside of conscious awareness, prior research indicates that individuals sometimes explicitly revisit elements of familiar stories when navigating uncertainty in real life. A self-report measure of RII exists (Slater et al., 2018); however, to my knowledge no measurement tools exist that address propensity to use fictional stories as reference points when navigating one's own life.

The Present Work

Bodies of research from numerous areas of psychology indicate that stories are an important aspect of people's understanding of their lives. Individuals construct narratives about their own past experiences, integrating memories into evolving life stories that provide meaning and direction. At the cultural level, master and alternative narratives offer socially shared templates that communicate expectations about how lives are typically and ideally lived, supplying ready-made plots to which personal experiences can be compared. Fictional narratives provide immersive simulations of reality that allow individuals to interpret their own pasts and

explore alternative possible trajectories. In each case, narratives function as interpretive scaffolds to facilitate meaning- and decision-making. Further, individuals differ in the extent to which they construct and draw on these narrative resources — and, importantly, variability in engagement with narratives is associated with differences in well-being.

I propose that individuals differ in the conscious propensity to interpret experiences narratively using pre-existing stories of numerous types (e.g., fiction, autobiographical memories, the life stories of others, cultural master narratives) as references: I have termed this propensity Narrative Referencing. In the present work, I aimed to create a quantitive self-report tool to measure Narrative Referencing.

Because the theoretical background for this construct derives from many distinct areas of research, I proceeded cautiously in the development of a measurement tool to ensure that the tool would be as useful and theoretically grounded as possible. To this end, six studies were conducted based on the Delphi method (Linstone & Turoff, 1975). In Studies 1 and 2, feedback from experts in relevant psychological areas was solicited to refine the operationalization of Narrative Referencing and to gather information about related constructs and theories. In Study 3, an initial item pool was developed and feedback from a small sample was solicited to refine the item pool. Secondary item analysis was conducted in Study 4 to refine the item pool further. In Study 5, exploratory factor analysis was conducted on data collected on the refined item pool. Finally, in Study 6, confirmatory factor analysis was conducted, and criterion validity was tested. This project's OSF page can be found at the following link: https://osf.io/xg9w5/overview?view_only=42b8e2327d1143b3b45acfe94b271f0b.

Study 1: Expert Construct Elicitation

In Study 1, I aimed to create a working definition of the construct of interest, then to present the definition to experts in related topics for feedback in construct elicitation interviews. Feedback collected from these experts provided insights into the strengths and shortcomings of my construct definition, strengths and shortcomings of the construct itself, an estimation of the practicality and utility of the type of measure I planned to develop, and some indications of the best ways to proceed with operationalization in Study 2. Experts also pointed out relevant measurement tools, empirical articles, or bodies of literature of which I was unaware.

Method

Researchers with expertise in topics relevant to the construct in development were contacted by email. Emails included a brief description of the reason each expert's feedback was being solicited, a request to provide input to help with operationalizing the construct, and a link to the construct elicitation survey. Seven psychological researchers responded to my recruitment email and completed the survey. All respondents were university professors whose research was in areas relevant to the construct being developed, including narrative identity, relationships with fiction, self-perception, social well-being, social media use, autobiographical writing, and emotional self-regulation.

In the survey, respondents were presented with an early description of the construct, then called "self-narrativizing." "Self-narrativizing," as defined in Study 1, is understood to be a process by which people construct a coherent, meaningful sense of self. It is likely related to introspection and self-perception, might occur iteratively, and might only occur under certain conditions (e.g. when a person is prompted; when a person is experiencing a period of uncertainty in their life). Respondents were then asked a series of open-ended questions

asynchronously online about their interpretation of the construct, their thoughts on the possible functions of the construct, their appraisals of the likelihood that a measure of this construct would find individual differences, their thoughts on other constructs that might be related to "self-narrativizing," and their suggestions of existing research that would be relevant to the further development and operationalization of this construct.

Results

Overall, responses collected in Study 1 indicated that experts in areas related to my focus believed that ideas included in the definition of "self-narrativizing" were worth investigating, and that developing a tool to measure them could be possible and useful.

In reviewing the responses gathered in this study, some areas for improvement came to light. "Self-narrativizing" was clearly related to work other researchers have done: On one hand, this was encouraging, because I would be able to build on an existing literature of empirical findings that are of interest to others. On the other hand, the construct might not be unique enough to merit the development of a new scale, as several other scales (e.g., the TALE, the ANIQ) exist that measure similar constructs. The construct "self-narrativizing" was still somewhat vaguely defined, as evidenced by points of uncertainty and disagreement among the experts consulted in Study 1 about the individual differences that they thought I would be likely to find: It was unclear whether the construct is a process that occurs spontaneously or deliberatively, whether people engage in it constantly or only when prompted, and whether it is more of a skill or a propensity. Finally, "self-narrativizing" assumed a connection between life narratives and fictional narratives that lacks substantial empirical support.

In response to these concerns about the construct, a new definition was developed that addresses them. Issues of scope were particularly emphasized in the new definition: By

reviewing the literature recommended by the experts contacted during this study, I gained a more thorough understanding of what has already been studied related to my construct; what, if anything, remained to be addressed; and what aspects of my definition that were currently unclear have more or less empirical support. I was thereby able to narrow the definition of my construct to minimize overlap with existing constructs.

Study 2: Construct Operationalization Interviews

Following Study 1, I created a new construct definition. The new definition includes a smaller and more narrowly defined scope for the construct, includes more detail about how the process might occur, and makes clearer suggestions about what the motivations for engaging in the process might be. Specifically, the definition in Study 1 focused on a process inspired by research on coherent and overarching narrative identity. The definition in Study 2 focuses more on a moment-to-moment propensity to utilize narratives to make sense of various topics including but not limited to oneself. The construct has been tentatively renamed "narrativizing" to reflect the changes to the definition. The purpose of Study 2 is to present the updated construct definition to psychological researchers for feedback to aid in operationalization.

Method

Respondents were recruited via email. At the end of Study 1, respondents were asked if they would be willing to provide additional feedback about this project in the future; all those who agreed and provided their contact information were sent follow up emails with the link to the Study 2 materials. New respondents were recruited with emails similar to the recruitment emails used in Study 1. Nine psychological researchers responded to the construct elicitation interview. Respondents were university faculty, held doctoral degrees, or were senior-level

doctoral students. All respondents conduct research in areas relevant to the construct being developed to varying degrees.

The interview was conducted asynchronously online. I presented respondents with an updated description of the construct, then called "narrativizing." After this description, respondents were asked a series of open-ended questions about items that should be included in the measure being developed, their thoughts on when people might engage in narrativizing and how aware people are of doing so, things I should keep in mind while developing the measure, and their suggestions of existing research that would be relevant to the further development and operationalization of this construct.

Results

In general, respondents understood the construct, believed it could be measured, anticipated that individual differences would be measurable, and expressed eagerness to know more about the progress of the project. Several questions also arose in responses to the operationalization interview, with recommendations provided by the respondents that were helpful in going forward.

The first issue that arose pertained to how many constructs are actually included in what I had described as narrativizing. Based on numerous respondents' answers, it was unclear whether the propensity to reference existing narratives is more similar to or distinct from the propensity to create novel narratives. The construct definition was written with the anticipation that eventual factor analysis of the yet-to-be-written measure's items would yield a two-factor solution, so this was not entirely surprising. Nonetheless, because some respondents found the current construct description to be confusing while others indicated that the two aspects of the construct might operate at different levels of consciousness, it became more obvious at this point that this aspect

of the construct needed more attention. In future phases of this project, I would need to consider whether these aspects of narrativizing are related enough to each other to be considered parts of the same construct or whether they should be divorced from one another.

Another question raised both directly by respondents and indirectly through my own investigation of the constructs and articles respondents recommended I look into was whether narrativizing is different enough from existing constructs to warrant a new measurement tool. Namely, life narrative and narrative identity measures, autobiographical memory, and cognitive styles seem very closely related to narrativizing. Moving forward, it was therefore important to maintain theoretical and empirical distance from existing constructs/measures.

The disagreement among respondents as to whether narrativizing is a conscious process merits some caution as well, especially when paired with the question raised by one respondent as to whether narrativizing can be adequately captured with a self-report survey, since such a measurement tool implies that the construct is something people are consciously aware of doing. This question provided some theoretical structure as the operationalization continued: Although some aspects of narrative thinking are undoubtedly unconscious, narrativizing should be defined specifically as a conscious process (or, as the conscious aspect of a process that is both conscious and unconscious). It is certainly true that other related constructs are not always conscious and must be measured indirectly or behaviorally; this is a notable point of differentiation between narrativizing and those other constructs. A list of other potentially related constructs suggested by respondents in this study is in Table 1.

Table 1

Respondent Suggestions of Constructs Relevant to "Narrativizing"

Constructs	
Specifically narrative-related	Need for cognition
Enjoyment of stories	Pattern-matching
Explaining through analogy	Perspective-taking
Life story identity model: McAdams, D.	Prospective memory
Narrative engageability	Retrospective imaginative involvement
Narrative processing: Escalas, J.	Self-direction value (Schwartz, 1992)
Purpose in life (Scheier et al., 2006)	Sense-making
Story utility	*Disorders, non-normative thinking, self-destructive behavior*
Transportability	Alcohol use or substance abuse (inverse relationship)
Cognition and social cognition	Conspiracy theories
Apophenia (Blain et al., 2020)	Mood and personality disorders
Autobiographical memory	*Emotion*
Cognitive ability	Emotional experience labeling ability
Creativity	Need for affect
Empathy	*Other*
Fantasy subscale of the Interpersonal Reactivity Index (Davis, 1980)	Self-efficacy
Imagination	Meaning-making
Mental imagery	Religiosity
Mental simulation	
Mentalizing (Luyten et al., 2020)	

Note. Citations are included only when included by respondents themselves. When a researcher/author was recommended but not a specific article/book, the researcher's/author's name is included without additional information. Citations are included in the References section of this article; names alone are not unless they are cited elsewhere.

Combining this concern about whether narrativizing is a conscious experience with the aforementioned concern about narrativizing consisting of two distinct constructs (i.e., narrative referencing and narrative creation), it seemed most fruitful to pursue a measure that emphasizes narrative referencing more than narrative creation. Autobiographical memory and narrative identity include narrative referencing (as with master narratives and cultural scripts), but, to my understanding, this is primarily in the service of creating novel narratives about oneself.

Declarative narrative creation is a conscious process, and therefore necessitates measures like the life story interview process (McAdams, 2008) that allows the interview to access aspects of a personal narrative that interviewees might not be consciously aware of (including fitting their narratives to existing narrative arcs like the redemption narrative, as in Adler et al., 2015).

Explicit referencing of existing narratives, however, is well-suited to a self-report measure because it relates to the salience of familiar stories. Asking people to describe how much they reference pre-existing narratives specifically would measure the degree to which people are *conscious* of doing this, regardless of how much they do so unconsciously. Self-report is an ideal way to measure conscious narrative salience (although it should be noted that low scores on the eventual scale specifically mean low conscious awareness of referencing narratives, rather than lack of narrative referencing altogether). This approach differentiates the construct from existing work effectively, and aligns with my goal when I initially proposed this project: Among other things, a goal was to eventually use the measure to test whether certain groups (e.g., people experiencing life stage transitions, queer people, neurodivergent people) explicitly project onto existing narratives to develop/scaffold their sense of identity more than other groups. In other words, I am more interested in how people use narratives as tools than I am in narrativizing as a cognitive style.

After receiving feedback in this study, I updated the definition of narrativizing to be: *The conscious propensity to reference preexisting narratives (e.g. fiction, narrativized autobiographical memories, stories told by others about their lives, cultural master narratives, etc.) in situations encountered in daily life*. I expect that this propensity would often be deployed in the service of novel narrative construction. Narrative creation's connection to narrative referencing should still be assessed empirically in case they are indeed closely linked, so it will

not be abandoned in the present project entirely. Nonetheless, my theoretical focus shifted to emphasize narrative referencing and the name of the construct was changed to reflect this shift in focus.

The last question to consider going forward was whether to pursue a frequency measure of how often people reference narratives, or a measure of how well people feel that narrativizing describes their experiences/preferences. Because I had reason to believe that there are individual differences in conscious awareness of referencing existing narratives, a frequency measure would not be ideal, as that would imply that most people are conscious enough of their propensity to reference narratives that they can estimate how often they do it. I expected that some of the individual differences in narrativizing will come from different levels of conscious awareness of narrative referencing; as such, a measure of propensity/accuracy fits the current conceptualization of the project better than a tendency/frequency measure.

Study 3: Initial Item Pool Development and Refinement

After reviewing the feedback I received in Study 1 and 2, I created an array of potential items for inclusion in a measure of the construct as defined in the Results Summary for Study 2. The purpose of Study 3 is to ensure that these items are 1) easy to interpret, 2) difficult to misinterpret, and 3) reasonably easy to answer. To this end, I presented the items to a small number of participants to provide feedback so that the item list could be culled and refined prior to proceeding with factor analysis.

Method

Participants were 56 undergraduate students[4] recruited in exchange for partial fulfillment of a class research participation assignment. Data were collected online. Each participant

[4] Demographic information was not collected for this sample.

completed half (70) of the 140 items to prevent response fatigue, such that n_{item} was between 24 and 29. The items presented to each participant were randomized, and items were presented in randomized order. After every item, participants were asked how interpretable they found the item, and they were given the opportunity to provide feedback on it.

Results

Descriptive statistics were generated for responses to items (means, standard deviations, range, normality tests) and critique questions (percent of total responses to each item noting a critique, compared to total responses that the item was well-worded and easily understood). I noted items that seemed to be easy for participants to answer based on participants' critiques and prioritized including those in the next stage of measure development. The items that generated a high proportion of criticism were either eliminated or marked as needing substantial editing work for the next stage of measure development.

I sorted the remaining items by themes and topics, and consulted with ChatGPT (Open AI, 2025) about these groups of items using the prompt:

> *I am trying to write some survey items that will measure [brief description of the theme/topic of the item group]. Some examples of items I already have are [list of some original items]. Can you please suggest some revisions to these items, and/or some alternative items that measure the same kinds of things?*

I revised some items based on ChatGPT's suggestions, prioritizing editing the ones that received more criticism from participants and retaining most of the wording from items that received little or no criticism from participants. I then created a new list of the revised items, and added some new items that ChatGPT suggested.

With the updated items, I again prompted ChatGPT: “I'm making some survey items. Do any of these stand out as measuring something different from what the other items measure?” I evaluated the items ChatGPT singled out based on this and either removed or edited them (or included them in a different theme/topic group, when possible.)

Next, I gave ChatGPT the revised list of items with the prompt, “Looking at the updated item list below, are there any changes you would make to the wording, or items that you would recommend combining? I need the tone to be somewhat personal and easy to understand at a high school reading level, but not too informal.” I revised the wording of the items (sometimes with ChatGPT’s suggestions, sometimes not, sometimes with some of ChatGPT’s suggestions but not all and/or with some of my own additional edits).

Finally, I created a new list of items (Table 2) after this process and cut items that seemed redundant, less relevant to the construct definition, or too complicated. I made additional edits to items to improve clarity, succinctness, and consistency with the other items.

Table 2

The 48-Item Narrative Referencing Scale

Items	
1 I have role models	10 I feel like my life is following a similar path to that of someone I know or admire
2 I take inspiration from other people	11 I reflect on stories from TV, books, and movies to help me navigate real-life situations
3 I try to avoid mistakes that I’ve seen others make	12 I feel a sense of personal connection with certain fictional characters
4 I make decisions by imagining what people I know would do	13 I adopt the behaviors, attitudes, or values of fictional characters
5 I make decisions based on what I see people I know doing	14 I think about how fictional characters would handle situations similar to my own
6 I look for similarities between my life and the lives of others	15 I use fictional stories as a guide for imagining my future
7 I identify with certain people I know in real life	16 I apply insights I’ve learned from fictional characters’ decisions to my own life
8 I use what I know about other people’s life paths to anticipate possible outcomes for my own	17 I relate my personal experiences to events in fictional stories
9 I look to historical or public figures as examples when imagining my own future	

18 I imagine myself as if I were a character in a story
19 I recognize patterns in real life that remind me of stories I've read or watched
20 There are some fictional characters or stories that have shaped my perspective on life
21 I think about my life as a story that is unfolding
22 I think about my personal experiences as if they were part of a larger story arc
23 I mentally organize my life events into a meaningful story
24 I reflect on past experiences to understand my thoughts, behaviors, and current life experiences
25 I reflect on key turning points in my life to guide my future decisions
26 I compare my past self to my present self to see how I have changed over time
27 I try to identify recurring themes in my life to better understand myself
28 I make sense of my identity by reflecting on my life story
29 I consider how my decisions fit into the bigger story of my life
30 I imagine how I would tell my life story to other people
31 I make decisions based on whether they will lead to a future I want
32 I imagine an ideal version of myself and try to live up to it
33 I see my current actions as shaping my future
34 I make decisions by imagining looking back on my life from the future
35 I avoid making choices that would lead to a life story I wouldn't want to tell
36 I value reaching important life milestones
37 I make decisions by considering the values and expectations of my family, community, or culture
38 I think about whether my life matches traditional expectations for how it should unfold
39 I feel uncomfortable when my life doesn't match social expectations for what I 'should' be doing
40 I feel fulfilled when my life aligns with broader societal ideals of success and happiness
41 I find meaning in following life patterns valued by previous generations
42 I consider my future goals in terms of how they fit into cultural narratives of success
43 I use my own thoughts, feelings, and experiences to help me understand other people
44 I think about other people's lives as stories that are unfolding
45 I think about the behavior of people I know to understand the behavior of strangers
46 I imagine what living someone else's life would be like
47 I use examples from history to understand what's happening now
48 I use past experiences — mine or others' — to help predict how new situations might unfold

---

Note. Instructions read: "The following phrases describing people's thoughts and behaviors. Please read each statement carefully, and then click the circle that corresponds to how accurately each statement describes you." Responses are given on a 6-point Likert-type scale, with 1 = "Does not describe me at all," and 6 = "Describes me completely."

Study 4: Secondary Item Analysis

The purpose of Study 4 was to quality-check and potentially reduce the number of items in the measure prior to factor analysis by conducting a secondary item analysis.

Method

The 48 Narrative Referencing Scale items were included in two unrelated online studies for which I was collecting data concurrently;[5] the total sample before exclusions consisted of 277 participants. Exclusions were made on the basis of substantial missing data (n = 13), missing data from any of the Narrative Referencing items (n = 30), failed attention checks (n = 33), the participant indicating that their data should not be included in analyses (n = 3), and the participant having completed the study already previously (n = 1). The sample after exclusions consisted of 197 participants (M_{Age} = 22.27, SD_{Age} = 6.57, 61.42% women, 22.34% men, 16.24% another gender/multiple genders/preferred not to answer, 66.50% White, 8.63% Latine or Hispanic, 4.06% East Asian, 1.02% Black, 1.02% Arab/Middle Eastern/West Asian/North African, and 18.77% other races and ethnicities under 1%/multi-racial/preferred not to answer).

Descriptive statistics for mean, standard deviation, median, minimum, maximum, and skew were calculated for all items.

Results

Items were considered for deletion based on the following criteria: absolute skew values greater than or equal to 1.00 ($|skew| \geq 1.00$), minimum rating greater than 1 (the minimum Likert scale point; $Min \neq 1$), maximum rating less than 6 (the maximum Likert scale point, $Max \neq 6$), and small standard deviation (in this case, $SD \leq 1.00$). Six items fit one or more of these criteria; their skew, minima, maxima, and standard deviations are reported in Table 3.

[5] In one study using a student sample (N = 114 before exclusions), the Narrative Referencing Scale was administered at the end of an experimental manipulation in which participants considered or compared themselves to a close real other person or a fictional character. In the other study using student and community samples (N = 163 before exclusions), the Narrative Referencing Scale was administered at the beginning of an exploratory survey study addressing how people used fictional characters for identity development during formative periods of their lives, with a particular focus on queer people's experiences.

Table 3

Descriptive statistics for removed items

Item	*Skewness*	*Min*	*Max*	*SD*
I reflect on past experiences to understand my thoughts, behaviors, and current life experiences	**-1.06**	1	6	1.04
I compare my past self to my present self to see how I have changed over time	**-1.23**	1	6	1.14
I see my current actions as shaping my future	**-1.00**	1	6	1.10
I try to avoid mistakes that I've seen others make	-0.57	**2**	6	**0.92**
I use my own thoughts, feelings, and experiences to help me understand other people	-0.86	**2**	6	**0.96**
I use past experiences — mine or others' — to help predict how new situations might unfold	-0.42	**2**	6	**0 98**

Note. Values of |skew| > 1.00, $Min \neq 1$, $Max \neq 6$, and $SD \leq 1.00$ are bolded.

In addition to explicit criteria they matched, the three items with large absolute skewness had relatively low standard deviations compared to the other items, and the item "I use my own thoughts, feelings, and experiences to help me understand other people" had a relatively large absolute skewness.

Because of these potential causes for concern about these items and because these items do not tap core aspects of the construct of narrative referencing (seeming perhaps closer to aspects of autobiographical memory), all six were removed from the scale. The remaining item pool consisted of 42 items.

Study 5: Exploratory Factor Analysis

The purpose of Study 5 was to conduct exploratory factor analysis (EFA) on the items for the measurement tool now called the Narrative Referencing Scale. The results of this study were then to be used to refine the items list further and to determine if the scale should contain subscales.

Method

A rule of thumb of 10 participants per one item was used to determine sample size. A sample of 420 participants was therefore pursued.

A population-representative sample of 439 participants in the United States was recruited on Prolific. Data from participants were removed if they had not completed demographics questions, if they completed the survey in under 60 seconds, or if they failed an attention check The sample after exclusions consisted of 427 participants (M_{age} = 46.18, SD_{age} = 16.35, 51.52% female, 63.93% White).

After reviewing and agreeing to the consent information, participants were presented with all 42 items from the most recent version of the Narrative Referencing Scale with one additional direct instruction attention check item, presented in randomized order.

Results

Initial EFA

Eigenvalues were calculated and inspected. Six eigenvalues were greater than one. The "elbow" of the plotted eigenvalues was around two to four (see Figure 1). The nfactors() function from the {psych} package in R (Revelle, 2023) was used to inspect other features of the data related to the best number of factors to use: The Empirical Bayesian Information Criterion (BIC) was lowest for three to five factors ("elbow" around three factors); there was likewise an "elbow" at around three factors for Root Mean Residual (SRMR); and Very Simple Structure (VSS) fit was highest for three factors without a corresponding sharp increase in complexity (see Figure 2).

Figure 1

Scree Plot of Eigenvalues by Number of Components for 42-Item Scale

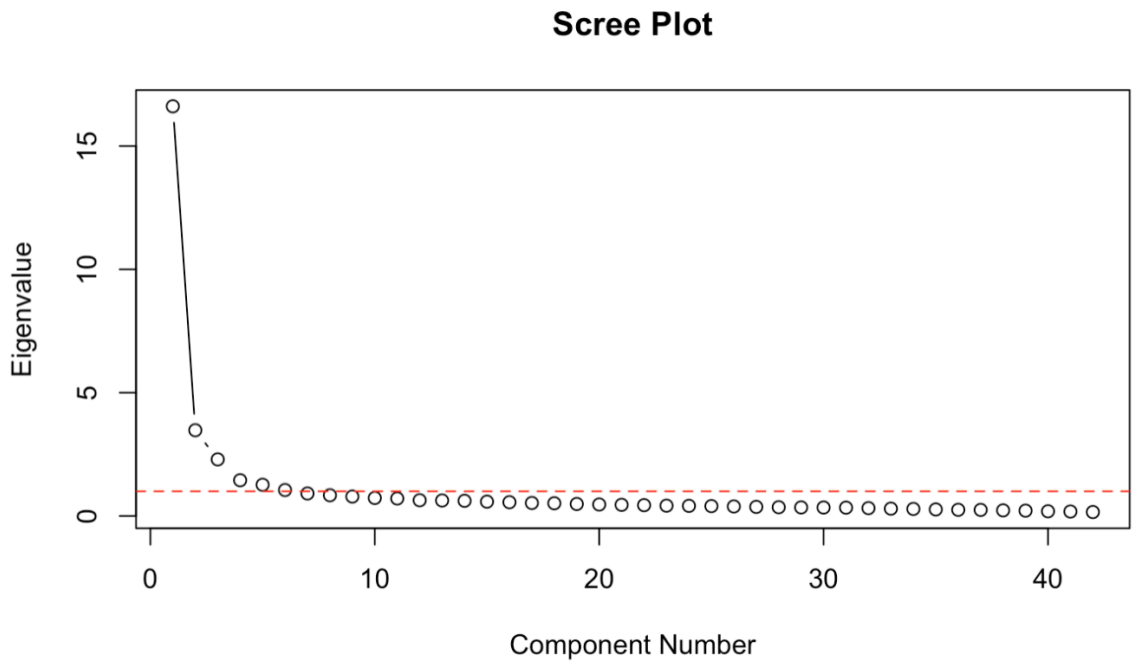
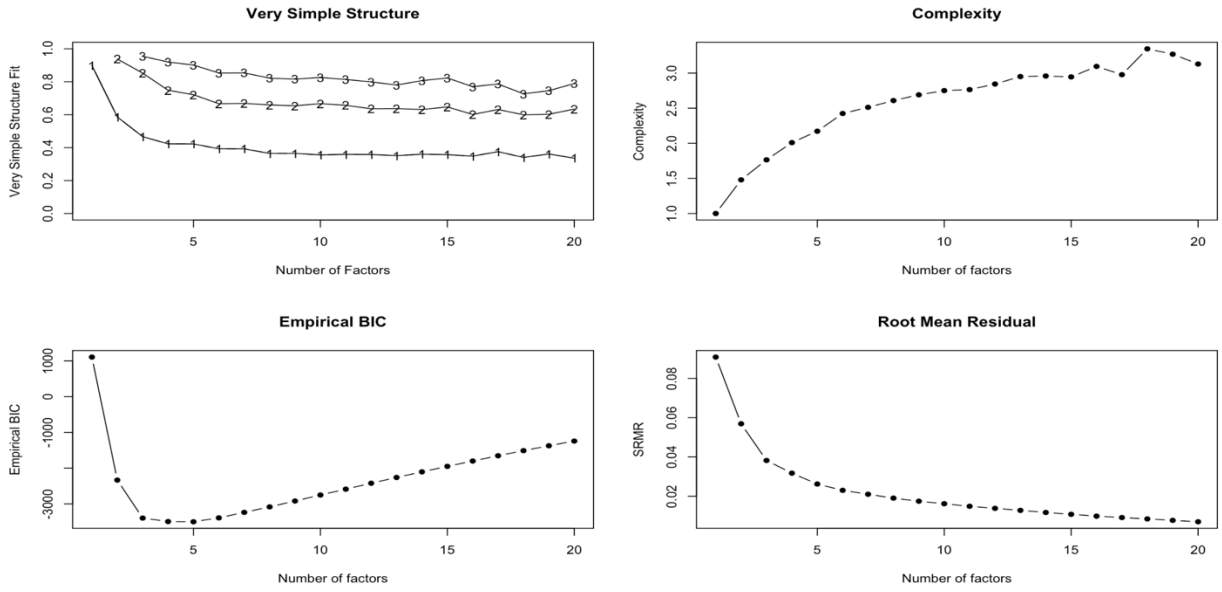


Figure 2

Model Fit Indices by Different Numbers of Factors for 42-Item Scale



Because these features of the data suggested that three factors would be optimal for the data, EFA with oblique rotation (oblimin) was conducted, and solutions with three factors (50% of cumulative variance) as well as two (46%) and four (52%) factors were inspected to determine the interpretability of each. I sorted items into factors according to their highest loading values. Three factors provided the most interpretable solution: Factor 1 (M = 3.04, SD = 1.28, Max = 6.00, Min = 1.00, α = .95, ω = .95) contains fiction-related items and a few more fantastical non-fiction-related items; Factor 2 (M = 4.08, SD = 0.91, Max = 6.00, Min = 1.07, α = .91, ω = .91) contains items that relate to narrative identity and/or the propensity to see one's own life as a story, and Factor 3 (M = 3.56, SD = 0.95, Max = 6.00, Min = 1.00, α = .92, ω = .92) contains items that describe decision-making based on and comparisons of oneself to real other people and sociocultural expectations.

Omega total was .97 and omega hierarchical was .74. The general factor accounted for 58% of the explained common variance (ECV), with a mean percent general variance of .59 (SD = .10), indicating a strong but not dominant general factor. A hierarchical model including one general factor and three group factors demonstrated good fit, $\chi^2(738) = 1586.91$, $p < .001$, RMSEA = .052, 90% CI [.048, .055], RMSR = .04, BIC = -2882.99. In contrast, a unidimensional model showed substantially poorer fit, $\chi^2(819) = 4364.52$, $p < .001$, RMSEA = .101, 90% CI [.098, .104], RMSR = .13, BIC = -595.98. Subscale omega total values ranged from .90 to .95, indicating high reliability. However, omega hierarchical estimates for the subscales (.52-.65) suggested that a substantial portion of reliable variance in subscale scores was attributable to the general factor, although omega group estimates (.25-.43) indicated meaningful unique variance beyond the general factor, particularly for two subscales. Overall,

the results support the presence of a strong general factor alongside distinct but related group factors. The correlations between the three factors were moderate-high (see Table 4).

Table 4

Correlation Grid for Factors in 42-Item Scale

		Factor 1	Factor 2	Factor 3
Factor 1	Pearson's *r*	-		
	p-value	-		
Factor 2	Pearson's *r*	0.59	-	
	p-value	<.001	-	
Factor 3	Pearson's *r*	0.67	0.70	-
	p-value	<.001	<.001	-

Item Pool Reduction

Minimum factor loadings. To ensure that all items included in the scale loaded enough onto any one factor to justify inclusion in the scale, items with factor loadings equal to or smaller than 0.40 were eliminated (Hair et al., 2019). Three items were therefore deleted: "I use examples from history to understand what's happening now," "I make decisions by imagining looking back on my life from the future," and "I take inspiration from other people." Removal of these items did not impact α or ω.

Unidimensionality. To ensure unidimensionality, items that had loadings of at least 0.30 on more than one factor were also removed (.30 was used as the threshold because it is sometimes used as the minimum viable threshold for item inclusion: Condon, 2018; Hair et al., 2019; Soto & John, 2017). Three items were therefore deleted: "I value reaching important life milestones," "I avoid making choices that would lead to a life story I wouldn't want to tell," and "I look to historical or public figures as examples when imagining my own future." Removal of these items either did not impact or only minimally impacted α and ω ("I look to historical or public figures […] caused α and ω both to decrease by .01; the other two by .00).

Internal reliability. Items that, upon removal, would increase α and/or ω were considered for removal. Only "I imagine what living someone else's life would be like" fit this criterion, increasing α and ω by .01. As the change was minimal, the item was tentatively retained.

Item descriptive statistics. Items were considered for deletion based on the same criteria used in Study 4: absolute skew values greater than or equal to 1.00 ($|skew| \geq 1.00$), minimum rating greater than 1 (the minimum Likert scale point; $Min \neq 1$), maximum rating less than 6 (the maximum Likert scale point, $Max \neq 6$), and small standard deviation (in this case, $SD \geq 1.00$). No items from Factor 1 or Factor 3 were removed based on these criteria; From Factor 2, "I make decisions based on whether they will lead to a future I want" was removed due to large skew (1.00).

Item-to-total and inter-item correlations. Item-to-total and inter-item correlations were inspected for each factor with only the remaining items included. The following rules of thumb were used to evaluate items on this basis: "the item-to-total correlations exceed .50 and that the inter item correlations exceed .30" (Hair et al., 2019, p. 161). No items were below these cutoffs in Factor 1 or Factor 2. In Factor 3, the item "I feel uncomfortable when my life doesn't match social expectations for what I 'should' be doing" had an item-to-total correlations of .50; and the correlations between this item and four other items in the factor were below .30. "I identify with certain people I know in real life" had an item-to-total correlation of .51, which is only slightly above the .50 rule of thumb; the correlations between this item and three other items in the factor were also below .30. These two items were therefore removed. No other items had inter-item correlations below .30 (except with the aforementioned items), and no other items had item-to-

total correlations close to .50 (the closest being .54, “I have role models”). Once these items were removed, no items had item-to-total correlations lower than .50.

Structure stability and item redundancy. After removing the items that had issues on the basis of the criteria previously described, I ran Unique Variable Analysis (UVA) to identify redundant items using the EGAnet (Golino & Christensen, 2022) package in R. UVA calculates weighted topological overlap (wTO) between item pairs, flagging pairs that exceed a specified redundancy threshold. I used a threshold of wTO > .20 (Christiansen et al., 2023). The analysis found no item pairs exceeding the threshold, indicating that all items contributed unique information and no immediate redundancy-driven item removal was necessary. Because no redundancy was detected, I proceeded with all items to the next step.

I next conducted Exploratory Graph Analysis (EGA) to estimate the dimensional structure of the scale. EGA identifies communities of items in a network of partial correlations, representing latent dimensions without assuming linearity or normality. EGA on the full item set estimated three dimensions as the underlying structure; network visualization confirmed that items clustered consistently into three communities. To assess the stability of the dimensional solution, I conducted bootstrap EGA with 500 iterations using the graphical lasso (glasso) model. The median estimated dimensionality was 3, with a 95% confidence interval of 2.68-3.32. Across bootstrap samples, 97.2% produced a 3-dimensional solution, with only 2.8% producing a 4-dimensional solution, indicating very high stability of the three-factor structure.

I then calculated item stability, representing the proportion of bootstrap samples in which each item was assigned to the same dimension as in the original EGA. Most items showed perfect stability (1.0), indicating that they consistently loaded onto the same factor. Several items had stabilities between .95-.97, which is still considered excellent. One item had a stability of

.86, indicating minor variability, and one item had a stability of .66, suggesting moderate instability. Based on the cutoff for minimum stability of .75 recommended by Christiansen and Golino (2021, as cited in Christiansen et al., 2023), the item with a stability of .66 ("I make decisions by imagining looking back on my life from the future") was removed.

Further item pool pruning. Following the discussed pruning procedures, the scale consisted of 32 items. Because one of my primary intentions for this measurement tool is for it to be included as a predictor or covariate included among other measures, I am cognizant of the impact a 32-item measure might have on quality of participant responses due to fatigue. It is important in this measure, therefore, to balance adequate representation of the construct with brevity. Following psychometric best practices guidelines, each subscale should contain at least three items, with four items being the minimum to test for unidimensionality (Stefana et al., 2025). Further, the number of items per subscale should be roughly proportionate to the significance of the subconstruct within the broader construct's definition (Stefana et al., 2025). As such, I aimed to reduce the numbers on the scale to no fewer than 12 (ensuring that each factor contained at least enough items to test for unidimensionality) and no more than 20 (6-7 items per factor, minimizing impact of participant fatigue on data quality).

Because alphas remained high (>.90) for all three factors after the described pruning, I next evaluated items for redundancy by again inspecting inter-item correlations for particularly strong correlations. Specifically, I considered items with correlation coefficients greater than or equal to .75 with numerous other items in the same factor as potential targets for culling.

In Factor 1, "I apply insights I've learned from fictional characters' decisions to my own life," "I adopt the behaviors, attitudes, or values of fictional characters," and "I relate my personal experiences to events in fictional stories," all correlated strongly with one another, as

did “I adopt the behaviors, attitudes, or values of fictional characters,” “I use fictional stories as a guide for imagining my future,” and “I think about how fictional characters would handle situations similar to my own” (“I adopt…” is a part of both of these cluster). Of these items, I removed the following: “I apply insights I’ve learned from fictional characters’ decisions to my own life” (highly correlated with item “I reflect on stories from TV, books, and movies to help me navigate real life situations” but less readable), “I relate my personal experiences to events in fictional stories,” (relatively weak conceptual relationship to the construct definition, as the item involves applying real experiences to fiction, not fiction to real life), and “I adopt the behaviors, attitudes, or values of fictional characters” (relatively weak conceptual relationship to the construct definition as there is no mention of stories).

No items were correlated above $r = .75$ in Factor 2 or Factor 3.

Finally, I assessed items on the basis of theoretical fit with the overall construct definition and the other items in the factor.

From Factor 1, “I imagine what living someone else’s life would be like” and “I imagine myself as if I were a character in a story” were removed because, unlike all the other items in that factor, they do not include any mention of fictional stories, and “I feel a sense of personal connection with certain fictional characters” due to low conceptual fit, as it does not necessarily address relating elements of the character’s story to one’s own life.

From Factor 2, “I think about other people’s lives as stories that are unfolding” was removed because it was the only item in this factor that described thinking of others’ lives as stories rather than one’s own life; “I think about my personal experiences as if they were part of a larger story arc” was removed due to more complex wording and large conceptual overlap with the item “I think of my life as a story that is unfolding.” “I imagine an ideal version of myself

and try to live up to it" and "I imagine how I would tell my life story to other people" were removed due to these items' unnecessary introduction of the concepts of aspiration and social presentation.

From Factor 3, "I think about the behavior of people I know to understand the behavior of strangers" was removed because it was the only item in the factor that compared the lives of others to the lives of different others, rather than comparing the lives of others to one's own life. "I look for similarities between my life and the lives of others" and "I have role models" were also removed due to conceptual similarity to and less specificity than other items in Factor 3; "I make decisions based on what I see people I know doing" and "I make decisions by considering the values and expectations of my family, community, or culture" were also removed due to conceptual similarity to other items with less relevance to narrative mental modelling, with the former addressing only concrete observation and the latter potentially relating more to social desirability than narrative thinking. "I feel fulfilled when my life aligns with broader societal ideals of success and happiness" was removed due to vagueness, as it is unclear from the item's wording whether the fulfillment stems specifically from master narrative alignment or from incidental overlap in ideals.

Second-Pass EFA

After item pool pruning, analyses were repeated on the remaining 17 items using same methods. Five eigenvalues were greater than one. The "elbow" of the plotted eigenvalues was around two to four (see Figure 3). Empirical BIC was lowest for three factors; there was likewise an "elbow" at three factors for SRMR; and VSS fit was highest for three factors without a corresponding sharp increase in complexity (see Figure 4).

Figure 3

Scree Plot of Eigenvalues by Number of Components for 17-Item Scale

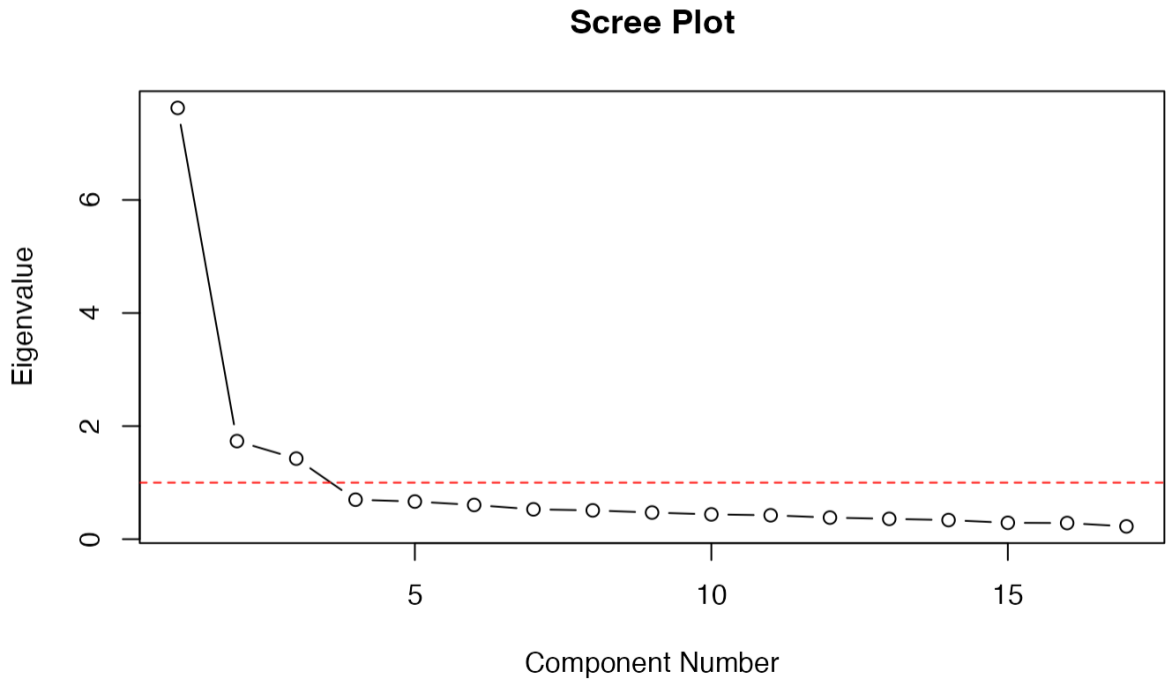
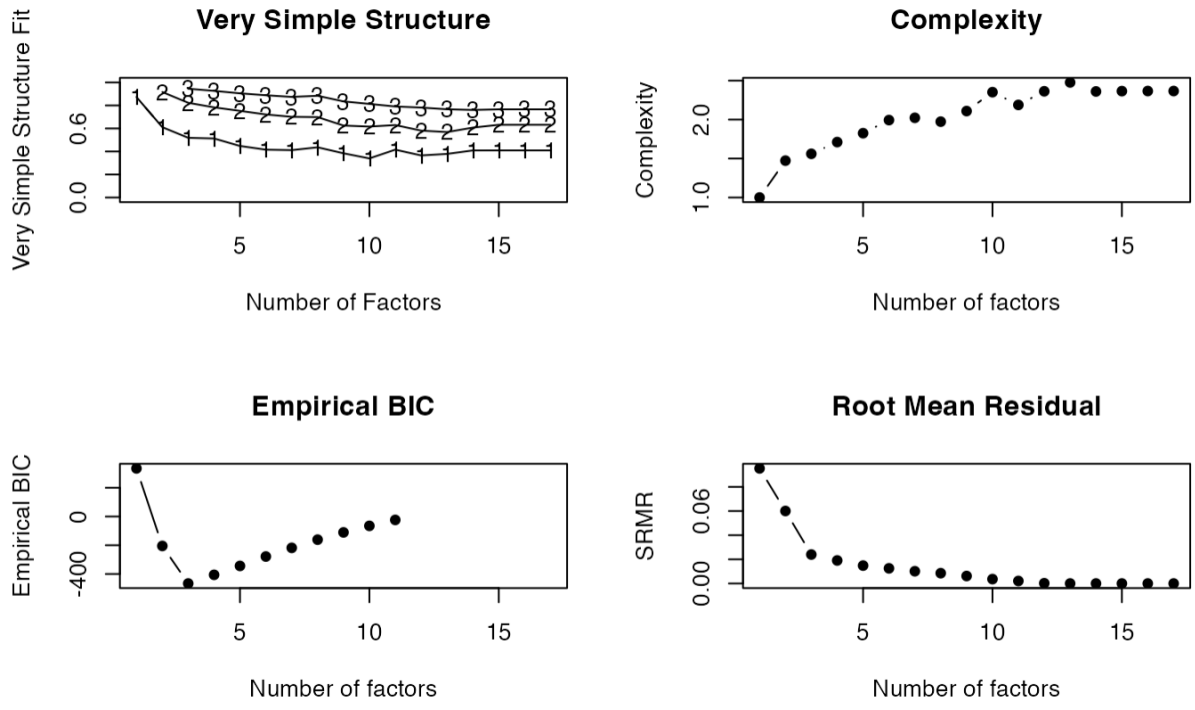


Figure 4

Model Fit Indices by Different Numbers of Factors for 17-Item Scale



Because these features of the data again suggested that three factors would be optimal for the data, I again conducted an EFA with oblique rotation (oblimin) and inspected the solutions with three factors (56% of cumulative variance) as well as two (50%) and four (58%) to determine the interpretability of each. As before, items were sorted into factors according to their highest loading values. Three factors provided the most interpretable solution, consisting of the same items as were included in the first pass EFA. Factor 1 (M = 3.10, SD = 1.33, Max = 6.00, Min = 1.00, α = .91, ω = .91), Factor 2 (M = 4.15, SD = 1.02, Max = 6.00, Min = 1.00, α = .86, ω = .86), and Factor 3 (M = 3.25, SD = 1.10, Max = 6.00, Min = 1.00, α = .85, ω = .85) contained no items with inadequate psychometrics properties as assessed in the initial item pool. Based on the items contained within each factor, I titled Factor 1 “Fiction Referencing,” Factor 2 “Self-Story Referencing,” and Factor 3 “Social Template Referencing.” All 17 items’ factor loadings are shown in Table 5.

Table 5

Factor Loadings for 17-Item Scale

Items	F1: Fiction Referencing	F2: Self-Story Referencing	F3: Social Template Referencing
F1: Fiction Referencing			
I use fictional stories as a guide for imagining my future	0.837	-0.066	0.054
There are some fictional characters or stories that have shaped my perspective on life	0.833	0.062	-0.084
I reflect on stories from TV, books, and movies to help me navigate real life situations	0.829	0.017	0.009
I think about how fictional characters would handle situations similar to my own	0.801	-0.054	0.115
I recognize patterns in real life that remind me of stories I've read or watched	0.626	0.216	0.011
F2: Self-Story Referencing			
I make sense of my identity by reflecting on my life story	0.025	0.777	-0.030
I try to identify recurring themes in my life to better understand myself	0.100	0.721	-0.120
I consider how my decisions fit into the bigger story of my life	-0.077	0.709	0.122
I reflect on key turning points in my life to guide my future decisions	-0.082	0.692	0.082
I think about my life as a story that is unfolding	0.077	0.631	0.029
I mentally organize my life events into a meaningful story	0.096	0.548	0.172
F3: Social Template Referencing			
I think about whether my life matches traditional expectations for how it should unfold	0.009	-0.032	0.763
I make decisions by imagining what people I know would do	0.077	0.003	0.700
I consider my future goals in terms of how they fit into cultural narratives of success	0.068	0.034	0.668
I find meaning in following life patterns valued by previous generations	-0.111	0.055	0.630
I feel like my life is following a similar path to that of someone I know or admire	0.054	0.073	0.592
I use what I know about other people’s life paths to anticipate possible outcomes for my own	0.180	0.198	0.432

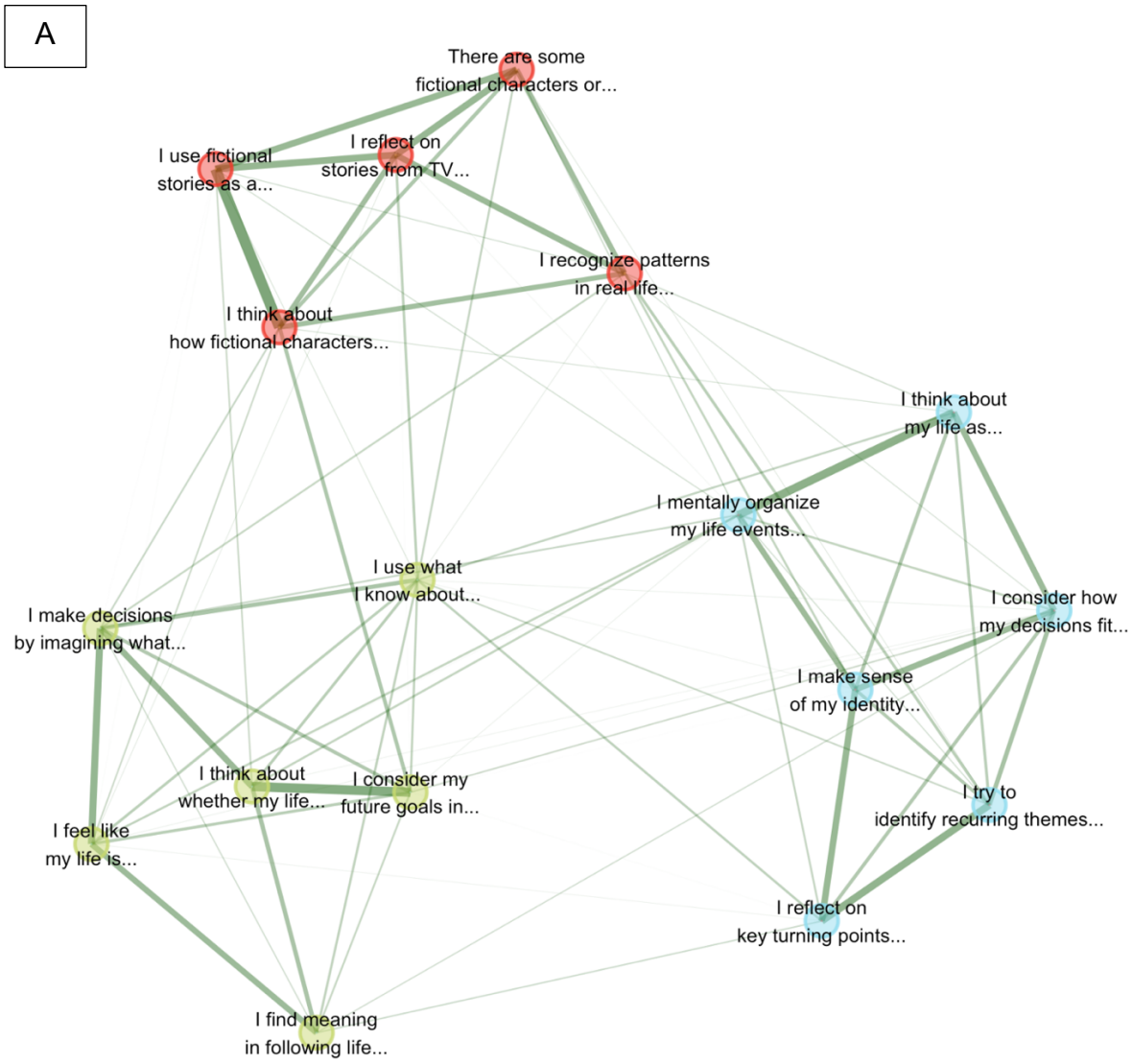
Results of the internal reliability analysis indicated excellent internal reliability, with Cronbach's α = .92, omega total (ω_t) = .94, and omega hierarchical (ω_h) = .75. The general factor accounted for 60% of the explained common variance (ECV = .60), with a mean percent general variance of 0.60 (*SD* = 0.09), indicating a strong general factor, justifying the use of a composite total score for the construct. A three-factor bifactor model demonstrated superior fit ($\chi^2(88) = 161.75$, $p < .001$, RMSEA = .044, 90% CI [.033, .055], RMSR = .02, BIC = -371.25) compared to a strictly unidimensional model ($\chi^2(119) = 1100.6$, $p < .001$, RMSEA = .139, 90% CI [.123, .147], RMSR = .02, BIC = 379.85). Although the general factor accounted for the majority of the common variance, omega group estimates indicated meaningful unique variance for the subscales beyond the general factor, especially Fiction Referencing (ω_s = .35) and Self-Story Referencing (ω_s = .40). Unique variance for the subscales beyond the general factor was a little lower for Social Template Referencing (ω_s = .26).

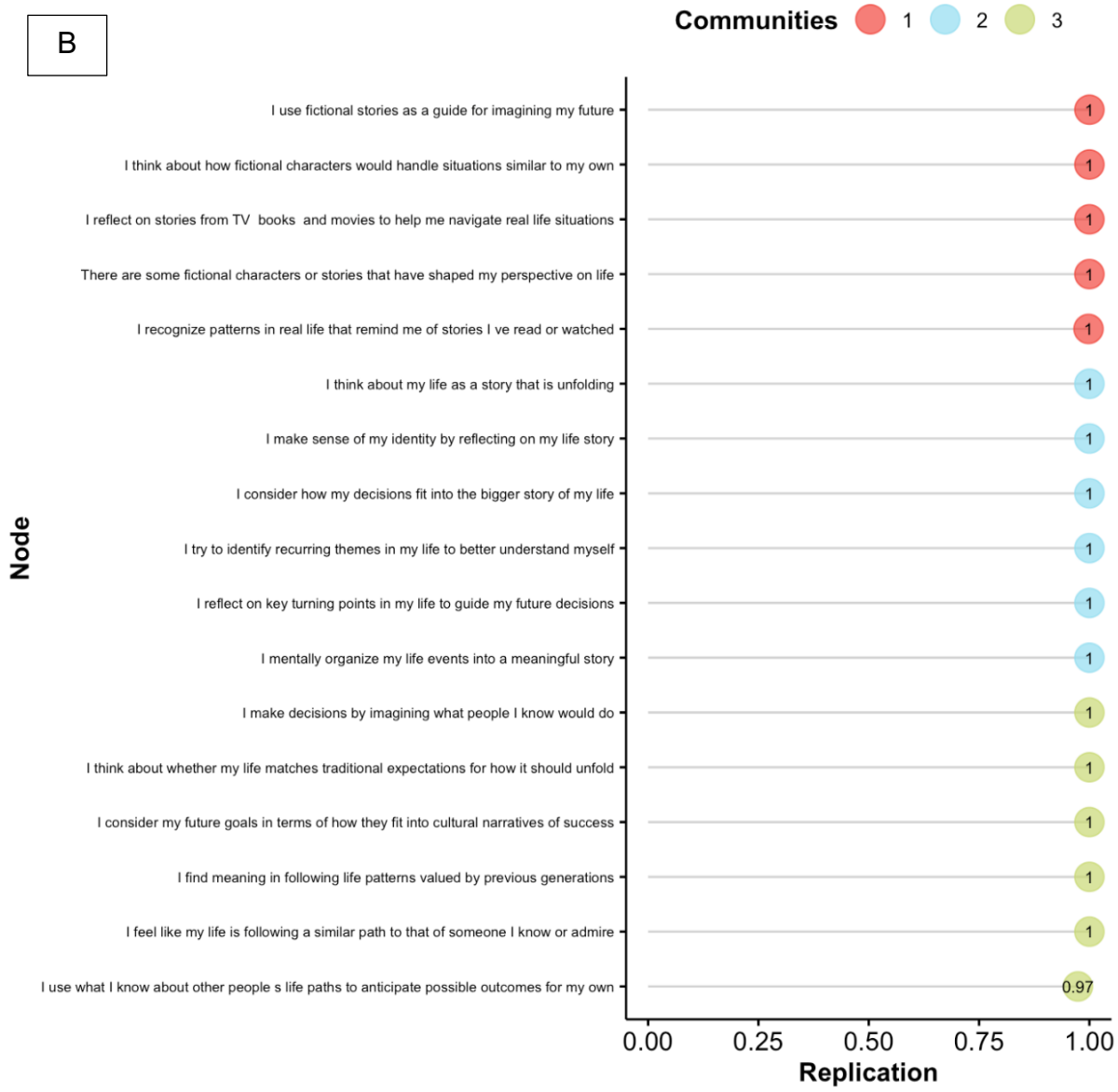
Structure and item stability were again assessed using the strategy described in "Item Pruning: Structure stability and item redundancy." UVA analysis flagged one item as potentially redundant ("I think about how fictional characters would handle situations similar to my own"); however, no item pairs exceeded the redundancy threshold (wTO > 0.20). Given the subscale already had only five items, the flagged item was retained to preserve content coverage and maintain approximate proportionality between numbers of items included in each factor. EGA on the full item set estimated three dimensions as the underlying structure; network visualization confirmed that items clustered consistently into three communities. The median estimated dimensionality of the bootstrap EGA was 3, with a 95% confidence interval of 3-3: Across bootstrap samples, 100% produced a 3-dimensional solution, indicating essentially perfect stability of the three-factor structure (Figure 5). Most items also showed perfect stability (1.0),

indicating that they consistently loaded onto the same factor, and one item had an excellent stability of .97. No items had stability lower than .97.

Figure 5

Exploratory Graph Analysis of the Narrative Referencing Scale





Note. R script for EGA and graphs was adapted from Christiansen et al. (2023). Figure 5A shows the network of all items (truncated), color-coded by the factor/community to which each belongs. Figure 5B shows the stability of each item within its community, measured in percentages of replications in which the item was sorted into a given factor/community.

Overall, the results support the presence of a strong general factor alongside distinct but related group factors. The correlations between the three factors were moderate-high (see Table

6). Accordingly, the scale may be interpreted using a total score, but use of subscale scores is also justified when theoretically relevant, as the structure is not strictly unidimensional.

Table 6

Correlation Grid for Factors in 17-Item Scale from Study 5

		Factor 1	Factor 2	Factor 3
F1: Fiction Referencing	Pearson's *r* *p*-value	- -		
F2: Self-Story Referencing	Pearson's *r* *p*-value	0.54 <.001	- -	
F3: Social Template Referencing	Pearson's *r* *p*-value	0.61 <.001	0.58 <.001	- -

Study 6: Confirmatory Factor Analysis and Validation

The purposes of Study 6 were 1) to conduct confirmatory factor analysis (CFA) on the items for the measurement tool now called the Narrative Referencing Scale, and 2) to perform convergent and divergent criterion validation testing. Study 6 was registered on the Open Science Framework; the open-ended registration has DOI: 10.17605/OSF.IO/AZRK9.

Method

The sample size necessary for this study was determined by considering power required for both validation and the CFA. For validation, strong correlations between the Narrative Referencing Scale and highly related scales were determined to be relatively easy to detect for convergent validity; therefore, sample size necessary to detect weak correlations between the Narrative Referencing Scale and less related scales was particularly important. To detect correlations of $r = .20$ with $\alpha = .05$ and $\beta = .20$, a sample of at least $N = 194$ would be required.

Determining sample size for CFA was more complex; I consulted Kyriazos (2018) for guidelines. Relevant considerations include the number of items (17), the number of factors (3), the number of anticipated parameters (40: 17 factor loadings, 17 error variances, 3 factor variances, 3 factor covariances), model saturation/degrees of freedom (*df* for EFA = 88; *df* for CFA = 153, both of which are far from saturation), factor covariance (all Narrative Referencing factor correlations are moderate) and normality (all Narrative Referencing factors are non-normal with Shapiro-Wilk results being $W_{\text{fiction referencing}} = .97$, $p < .001$; $W_{\text{self-story referencing}} = .97$, $p < .001$; $W_{\text{social template referencing}} = .90$, $p = .001$). Of these considerations, the non-normality of the factors is the main one that would require increasing the sample size.

Some rules of thumb for CFA discussed in Kyriazos (2018) suggest a participant-to-item ratio of 10:1. According to this rule, the sample should be at least $N = 170$. Other rules of thumb suggest participant-to-parameter ratios of 1:5, 1:10, or 1:20, which would result in a sample size for this study of $N = 200$, 400, or 800 respectively. A study by Kyriazos and colleagues (2018) described work using Monte Carlo simulations, and suggested the following:

> Muthén and Muthén (2002) concluded that for a CFA model with three factors and five continuous indicators per factor to reach a power of .81 in rejecting the hypothesis that the factor correlation is zero, the required sample size was: 1) N = 150 for normal indicators with no missing values, 2) N = 175 for normal indicators having missing values, 3) N = 265 for non-normal indicators and no missing values, and 4) N = 315 for non-normal indicators having missing values (Dimitrov, 2012). (p. 2218)

As the Narrative Referencing scale has three factors and five or six continuous indicators per factor, and I anticipated no missing values and non-normal indicators, I should accordingly pursue a sample of $N = 265$.

As most of the considerations for sample size suggested a sample size falling between $N = 200$ and $N = 400$, I aimed for a sample on the more robust end of that range (i.e., $N = 400$).

An initial population-representative sample of 434 participants residing in the United States was recruited on Prolific (2026). Data from participants were excluded if their "Captcha" score was under .50 ($n = 6$), if they failed to respond to any questions ($n = 1$), if they failed either of the attention checks ($n = 4$), if they straightlined two or more surveys ($n = 3$), or if they were missing data for any item in the Narrative Referencing Scale ($n = 0$). The sample after exclusions consisted of 420 participants ($M_{age} = 45.60$, $SD_{age} = 16.14$, 50.24% female, 63.81% White).

Procedure

After reviewing and agreeing to the consent information, participants were presented with the Narrative Referencing Scale and the measures used for convergent and divergent construct validity testing. Scales were presented in randomized order, and items within scales were presented in randomized orders. Two direct instruction attention check items were inserted ("I am paying attention: Please select 2," embedded in a measure with a Likert-type scale, and "Two plus two equals four," embedded in a measure with True/False response options).

Measures

In addition to the 17 Narrative Referencing Scale items, the following measures were used for criterion and discriminant validity testing. All measures are described in detail (including items and scoring information) in Appendix A. Descriptive statistics for all scales are shown in Table 7.

Retrospective Imaginative Involvement Scale, Short Version. This self-report survey (Slater et al., 2018) measures imaginative involvement with fictional stories retrospectively, after the story has ended. Theoretically, Fiction Referencing stems from propensity to continue

thinking about fictional stories after they have concluded, so should bear some resemblance to aspects of RII. The subscales measure imagining having interpersonal relationships with fictional characters and performers in TV shows and movies (the Parasocial Relationships with Characters [PSR-C] and with Performers [PSR-P] subscales); imagining counterfactual situations for fictional characters and/or for oneself related to fictional stories (the Retrospective Imaginative Involvement [RII] subscale); and feeling as if one has changed or had new experiences after exposure to a fictional story (the Boundary Expansion [BE] subscale). The RII and BE subscales bear some similarity to the Fiction Referencing subscale of the Narrative Referencing Scale, although they differ in that they do not strictly address the propensity to use fictional stories to make sense of one's own life and instead address a more imaginative, playful aspect of thinking about fictional stories asynchronously. These subscales will therefore be considered convergent criterion validity measures for the Fiction Referencing subscale. By contrast, the PSR subscales have substantial theoretical differences from the Narrative Referencing scale (especially the PSR-P), and will therefore provide a measure of discriminant validity for the Fiction Referencing subscale.

Narrative Identity Self-Evaluation Questionnaire (NISE). The NISE (Lind et al., 2025) is a self-report measure of narrative identity developed to be simpler to evaluate than traditional qualitative narrative identity measures and to allow participants more agency in the assessment of their own narrative identity than the use of coders allows for. The Autobiographical Reasoning (AR) and Narrative Structure (NS) subscale of the NISE are expected to be related to the Self-Story Referencing subscale of narrative Referencing, as AR measures the conscious process of assembling one's memories into a narrative, and NS measures the importance of having a coherent and accurate life story to the individual. Conversely,

Positive Themes (PT) and Narrative Identity Disturbance (NID), which respectively measure optimistic themes present in narrative identity and confusion/pessimism about narrative identity, are not expected to be particularly related to Self-Story Referencing, as that aspect of Narrative Referencing does not measure the contents of the self-story, only the individual's self-awareness and intentional use of the self-story. PT and NID therefore will serve as discriminant validation measures for the Self-Story Referencing subscale.

Iowa-Netherlands Comparison Orientation Measure (INCOM). The INCOM (Gibbons & Buunk, 1999) is a self-report measure of the propensity to compare aspects of one's own life to others'. While the Social Template Referencing subscale of the Narrative Referencing Scale does not explicitly address social comparison, it does address a similar process of considering others in reference to oneself. The INCOM therefore serves as a convergent criterion validity measure of Social Template Referencing.

Marlowe-Crowne Social Desirability Scale Short Form C (M-C Form C). The short-form Social Desirability Scale (Reynolds, 1982) measures the extent to which an individual is concerned with presenting themselves in a favorable light to others. This scale is intended to be used as a behavioral measure of the trustworthiness of participants' responses to other questionnaires (with the assumption that high scores indicate that a participant is likely to respond to questions dishonestly out of a desire to make a favorable impression). Here, however, it is used as a measure of the importance of being appraised favorably by others to provide a discriminant validity measure for the Social Template Referencing Subscale: While Social Template Referencing addresses attentiveness to social and cultural norms, it focuses more on internal satisfaction with one's life in reference to those norms and/or making decisions based on

social and cultural norm information, rather than anything related to the observation or judgment of others.

Very Efficient Assessment of Need for Cognition (NCS-6). The NCS-6 (Lins de Holanda Coelho et al., 2020) is a self-report measure of enjoyment of thinking. While need for cognition is not directly related to the Narrative Referencing Scale overall or any of its subscales, I anticipated that the NCS-6 would be somewhat correlated with the Narrative Referencing Scale because narrative referencing is, in theory, a somewhat cognitively demanding process.

Table 7

Descriptive Statistics for the Narrative Referencing Scale and Validation Measures

Scale	*M*	*SD*	*Min*	*Max*	α	ω_{total}	ω_h
Narrative Referencing (1-6)	**3.49**	**0.89**	**1.00**	**5.82**	**.91**	**.93**	**.68**
Fiction Referencing (1-6)	3.05	1.23	1.00	6.00	.88	.91	
Self-Story Referencing (1-6)	4.17	1.01	1.00	6.00	.86	.91	
Social Template Referencing (1-6)	3.18	1.01	1.00	6.00	.83	.89	
Retrospective Imaginative Involvement							**.71**
Parasocial Relationships: Character (PSR-C) (1-9)	3.80	2.21	1.00	9.00	.87	.88	
Parasocial Relationships: Performer (PSR-P) (1-9)	3.31	2.07	1.00	9.00	.86	.87	
Retrospective Imaginative Involvement (RII) (0-10)	3.86	2.73	0.00	10.00	.86	.87	
Boundary Expansion (BE) (1-8)	4.94	1.64	1.00	8.00	.88	.90	
Narrative Identity Self-Evaluation Questionnaire (NISE)							**.57**
Autobiographical Reasoning (1-7)	5.53	0.88	1.80	7.00	.78	.81	
Narrative Structure (1-7)	5.07	0.98	1.00	7.00	.76	.83	
Positive Themes (1-7)	4.69	1.23	1.00	7.00	.84	.86	
Narrative Identity Disturbance (1-7)	2.96	1.23	1.00	6.40	.80	.83	
Comparison Orientation (INCOM) (1-5)	**3.20**	**0.81**	**1.00**	**5.00**	**.89**	**.91**	**.78**
Ability (1-5)	2.96	0.97	1.00	5.00	.88	.89	
Opinions (1-5)	3.50	0.79	1.00	5.00	.78	.87	
Social Desirability Scale (MC Form C) (0-1)	**0.44**	**0.26**	**0.00**	**1.00**	**.80**	**.83**	**.60**
Need for Cognition Scale (NCS-6) (1-5)	**3.56**	**0.96**	**1.00**	**5.00**	**.92**	**.94**	**.68**

Note. For the Narrative Referencing Scale overall, no items would improve α if removed, although removal of one item would improve the Fiction Referencing subscale from .88 to .89. The MC Form C is intended to be scored summatively; however, here it is scored as a mean with minimum possible score = 0 and maximum possible score = 1. *M, SD, Min, Max*, α, and ω_{total} are omitted from overall scales and included only for subscales when the subscales are not intended to generate a general/overall score.

Minimum and maximum possible scores for each scale are provided in parentheses after the scale name, i.e., “Narrative Referencing (1-6)” — the minimum possible score for this scale is 1, the maximum possible is 6.

Results

Internal Reliability and Confirmatory Factor Analysis

Internal reliability analysis indicated moderate-high reliability, with Cronbach's $\alpha = .91$, omega total (ω_t) = .93, and omega hierarchical (ω_h) = .68. Subscales showed good internal reliability (Fiction Referencing $\alpha = .88$ and $\omega = .91$; Self-Story Referencing $\alpha = .86$ and $\omega = .91$; Social Template Referencing $\alpha = .83$ and $\omega = .89$).

A confirmatory factor analysis model[6] was created using the {lavaan} package (Rosseel, 2012) with the 17 items and three factors described in Study 5, with factors allowed to correlate. This model was compared to a simple one-factor model in which all items loaded on a single factor. A chi-square test evaluating the three-factor model's overall goodness of fit showed relatively poor fit to the data, $\chi^2(116) = 302.01$, $p < .001$, $\chi^2/df = 2.60$, that was nonetheless better than a test evaluating the baseline model, $\chi^2(136) = 3465.13$, $p < .001$, $\chi^2/df = 25.48$. Incremental fit over baseline was evaluated; acceptable fit was defined as at least two of the following: CFI ≥ 0.90, RMSEA ≤ 0.06, SRMR ≤ 0.08 (Hu & Bentler, 1999). Fit indices of the three-factor model were CFI = 0.944, RMSEA = 0.062 (CI [.053, .070], $p_{RMSEA < .05} = .012$, $p_{RMSEA > .08} < .001$), and SRMR = 0.059, indicating acceptable fit on all three criteria. The one-factor model had fit indices of CFI = 0.683, RMSEA = 0.145, and SRMR = 0.110, none of which meet acceptable fit criteria.

Factor loadings, standard errors (*SE*s), *p*-values, and R^2 for individual items, along with average variance extracted (AVE)[7] for each factor are reported in Table 8. All metrics are

[6] I consulted Jackson and colleges (2009) and Alavi and colleagues (2020) for CFA reporting.
[7] I consulted Fornell and Larcker (1981) for AVE use and interpretation

favorable with the possible exception of AVE = .440 for Social Template Referencing, indicating that the factor explains slightly less than half the variance in its items on average.

Given the psychometric profile of the Social Template Referencing (specifically its high composite reliability (ω_{total}) but relatively low AVE), I specified a second-order CFA to examine the structural relationship between the three subscales and an overarching Narrative Referencing factor. The second-order factor loadings .73 for Fiction Referencing (R^2 = .54), .62 for Self-Story Referencing (R^2 = .39), and .91 for Social Template Referencing (R^2 = .84), indicating that the general Narrative Referencing factor is the most closely related to Social Template Referencing: Social Template Referencing appears to serve as an anchor for the Narrative Referencing Scale. Conversely, the lower values for Fiction and Self-Story Referencing suggest they contribute more meaningful unique variance.

Table 8

Item- and Factor-Level Information from the Narrative Referencing Scale CFA

Items	Factor Loading	*SE*	*p*	R^2	AVE
F1: Fiction Referencing					**.612**
I use fictional stories as a guide for imagining my future	.871	.058	<.001	.759	
There are some fictional characters or stories that have shaped my perspective on life	.766	.066	<.001	.587	
I reflect on stories from TV, books, and movies to help me navigate real life situations	.809	.062	<.001	.654	
I think about how fictional characters would handle situations similar to my own	.812	.062	<.001	.659	
I recognize patterns in real life that remind me of stories I've read or watched	.631	.066	<.001	.399	
F2: Self-Story Referencing					**.519**
I make sense of my identity by reflecting on my life story	.781	.054	<.001	.610	
I try to identify recurring themes in my life to better understand myself	.674	.059	<.001	.454	
I consider how my decisions fit into the bigger story of my life	.692	.055	<.001	.478	
I reflect on key turning points in my life to guide my future decisions	.697	.054	<.001	.485	
I think about my life as a story that is unfolding	.753	.062	<.001	.567	
I mentally organize my life events into a meaningful story	.713	.064	<.001	.509	
F3: Social Template Referencing					**.440**
I think about whether my life matches traditional expectations for how it should unfold	.618	.069	<.001	.382	
I make decisions by imagining what people I know would do	.734	.062	<.001	.538	
I consider my future goals in terms of how they fit into cultural narratives of success	.669	.067	<.001	.448	
I find meaning in following life patterns valued by previous generations	.592	.070	<.001	.351	
I feel like my life is following a similar path to that of someone I know or admire	.637	.065	<.001	.405	
I use what I know about other people's life paths to anticipate possible outcomes for my own	.739	.059	<.001	.546	

Note. Latent variable variances were fixed to 1 (i.e., factors were standardized) for model identification.

Overall, the results support the presence of a moderate general factor alongside distinct but related subfactors. The correlations between the three factors were moderate (see Table 9; the covariance matrix is presented in Appendix B). Accordingly, the scale may be interpreted using a total score, but use of subscale scores is justified as the structure is not strictly unidimensional.

Table 9

Correlation Grid for Factors in 17-Item Scale from Study 6

		Factor 1	Factor 2	Factor 3
F1: Fiction Referencing	Pearson's *r*	-		
	p-value	-		
F2: Self-Story Referencing	Pearson's *r*	0.44	-	
	p-value	<.001	-	
F3: Social Template Referencing	Pearson's *r*	0.56	0.49	-
	p-value	<.001	<.001	-

Criterion Validity

Shapiro-Wilk tests showed significant non-normality for the Narrative Referencing scale and subscales (and most other scales measured); however, this can likely be attributed to the large sample size. Visual inspection of Q-Q plots and skewness/kurtosis values within acceptable ranges (|skew| < 2; |kurtosis| < 7) indicated that the distributions of all scales and subscales were sufficiently normal for parametric analysis using Pearson correlations with False Discovery Rate (FDR) corrections (details on scale normality are presented in Table 10 and Figure 6). The overall Narrative Referencing scale had moderate or weak significant correlations with all other scales except the M-C Form C (measuring social desirability).

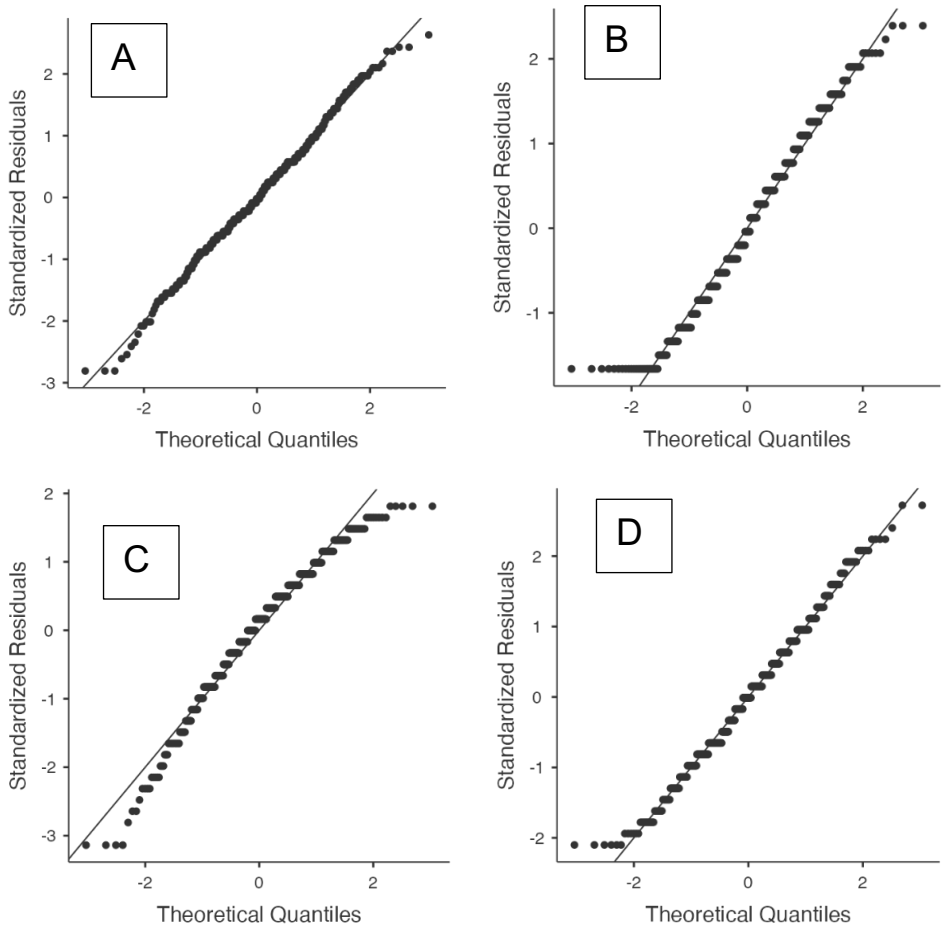
Table 10

Skewness, Kurtosis, and Shapiro-Wilk Normality Test Results for the Narrative Referencing Scale and Subscales

Scale	Skewness (*SE*)	Kurtosis *(SE)*	Shapiro-Wilk W (*p*
Narrative Referencing Scale	-0.03 (0.12)	0.05 (0.24)	1.00 (.317)
Fiction Referencing	0.18 (0.12)	-0.78 (0.24)	0.97 (<.001)
Self-Story Referencing	-0.64 (0.12)	0.25 (0.24)	0.97 (<.001)
Social Template Referencing	0.14 (0.12)	-0.37 (0.24)	0.99 (.010)

Figure 6

Q-Q Plots for the Narrative Referencing Scale and Subscales



Note. A: Narrative Referencing Scale. B: Fiction Referencing. C: Self-Story Referencing. D: Social Template Referencing

Fiction Referencing was moderately correlated with all Retrospective Imaginative Involvement subscales. I had anticipated that the strongest relationship would be between Fiction Referencing and the Retrospective Imaginative Involvement and Boundary Expansion subscales of the RII scale. Instead, Boundary Expansion was the weakest correlation while both Parasocial Relationship subscales and the Retrospective Imaginative Involvement subscale were somewhat stronger. While these results did not follow the anticipated pattern, they are not entirely unexpected either, since all RII scale correlations are moderate with Fiction Referencing, indicating that Fiction Referencing is related to different aspects of Retrospective Imaginative Involvement but the constructs are not entirely overlapping. Further, as predicted, Pearson's *r* was higher between the RII and Fiction Referencing than between the RII and other subscales of the Narrative Referencing Scales, and *r* was higher between Fiction Referencing and the RII subscales than between Fiction Referencing and most other scales (although correlation coefficients with the INCOM, measuring social comparison, were comparable).

As expected, Self-Story Referencing was moderately correlated with the Autobiographical Reasoning (NISE_AR) and Narrative Structure (NISE_NS) subscales of the NISE, and was not correlated with the Narrative Identity Disturbance (NISE_NID) subscale. It was also less strongly but still moderately correlated with the Positive Themes (NISE_Pos) subscale of the NISE. Also as predicted, Pearson's *r* between the NISE subscales were and Self-Story Referencing were higher than *r* between the NISE subscales and other Narrative Referencing subscales, and *r* between Self-Story Referencing subscale and the NISE Autobiographical Reasoning and Narrative Structure subscales than *r* between Self-Story Referencing and other measured scales.

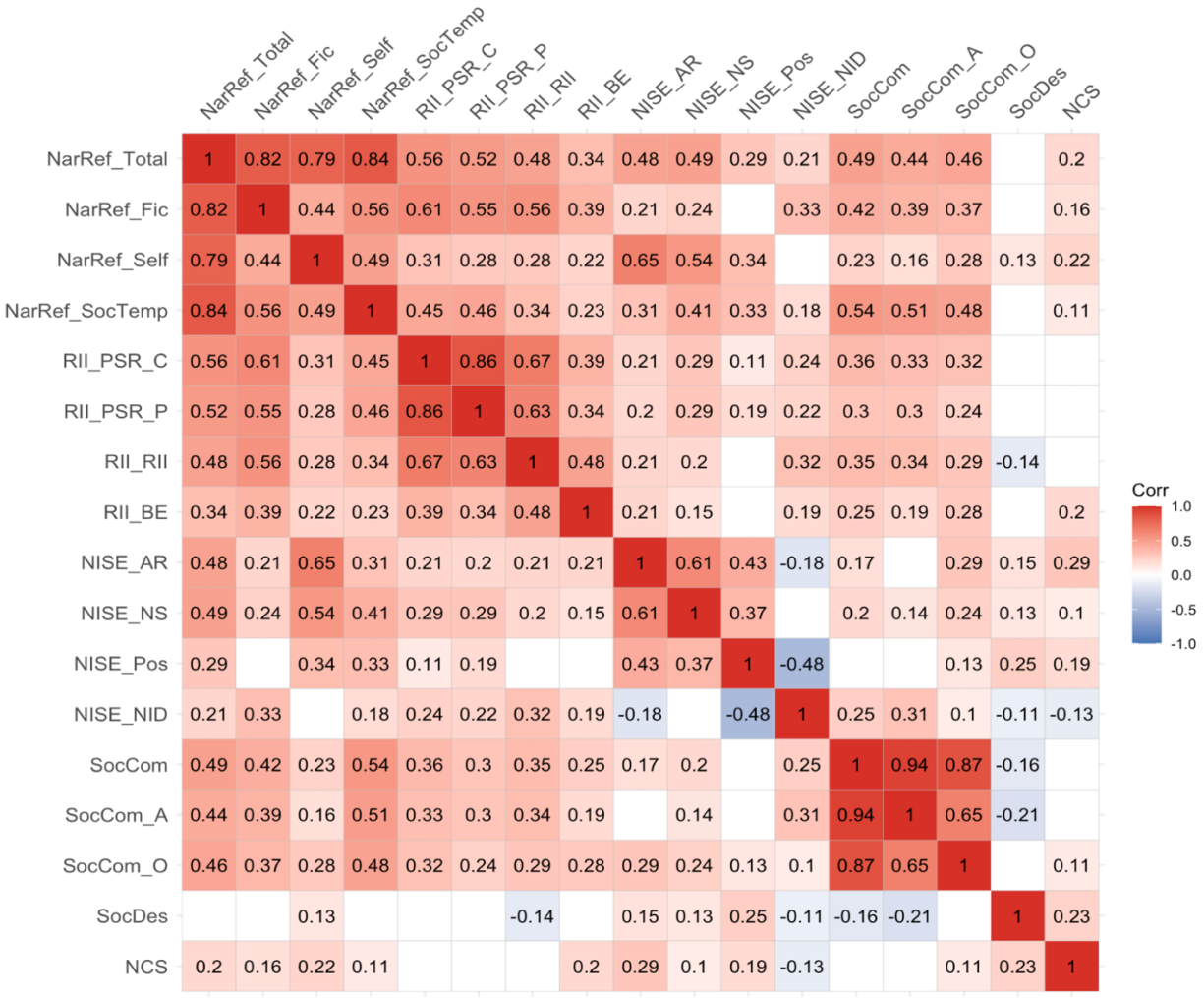
As predicted, Social Template Referencing was moderately correlated with the INCOM, measuring social comparison. Pearson's *r* was higher between Social Template Referencing and the INCOM than between Social Template Referencing and any other measured scale. Pearson's *r* between Social Template Referencing and the INCOM was also higher than *r* between the INCOM and any other Narrative Referencing subscale. Further, Social Template Referencing was not correlated with the M-C Form C (measuring social desirability).

Correlations between all subscales of the Narrative Referencing Scale and the NCS were weak.

Overall, the Narrative Referencing Scale subscales correlate moderately with measures with some conceptual overlap with them, and correlate weakly or not at all with measures with minimal/no conceptual overlap with them. These results support the criterion validity of the Narrative Referencing Scale and its subscales through convergent and discriminant validity. A heat map with Pearson's *r* for all scales is shown in Figure 7.

Figure 7

Correlation Matrix Heat Map for Narrative Referencing Scale, Subscales, and Covariates



	NarRef_Total	NarRef_Fic	NarRef_Self	NarRef_SocTemp	RII_PSR_C	RII_PSR_P	RII_RII	RII_BE	NISE_AR	NISE_NS	NISE_Pos	NISE_NID	SocCom	SocCom_A	SocCom_O	SocDes	NCS
NarRef_Total	1	0.82	0.79	0.84	0.56	0.52	0.48	0.34	0.48	0.49	0.29	0.21	0.49	0.44	0.46		0.2
NarRef_Fic	0.82	1	0.44	0.56	0.61	0.55	0.56	0.39	0.21	0.24		0.33	0.42	0.39	0.37		0.16
NarRef_Self	0.79	0.44	1	0.49	0.31	0.28	0.28	0.22	0.65	0.54	0.34		0.23	0.16	0.28	0.13	0.22
NarRef_SocTemp	0.84	0.56	0.49	1	0.45	0.46	0.34	0.23	0.31	0.41	0.33	0.18	0.54	0.51	0.48		0.11
RII_PSR_C	0.56	0.61	0.31	0.45	1	0.86	0.67	0.39	0.21	0.29	0.11	0.24	0.36	0.33	0.32		
RII_PSR_P	0.52	0.55	0.28	0.46	0.86	1	0.63	0.34	0.2	0.29	0.19	0.22	0.3	0.3	0.24		
RII_RII	0.48	0.56	0.28	0.34	0.67	0.63	1	0.48	0.21	0.2		0.32	0.35	0.34	0.29	-0.14	
RII_BE	0.34	0.39	0.22	0.23	0.39	0.34	0.48	1	0.21	0.15		0.19	0.25	0.19	0.28		0.2
NISE_AR	0.48	0.21	0.65	0.31	0.21	0.2	0.21	0.21	1	0.61	0.43	-0.18	0.17		0.29	0.15	0.29
NISE_NS	0.49	0.24	0.54	0.41	0.29	0.29	0.2	0.15	0.61	1	0.37		0.2	0.14	0.24	0.13	0.1
NISE_Pos	0.29		0.34	0.33	0.11	0.19			0.43	0.37	1	-0.48			0.13	0.25	0.19
NISE_NID	0.21	0.33		0.18	0.24	0.22	0.32	0.19	-0.18		-0.48	1	0.25	0.31	0.1	-0.11	-0.13
SocCom	0.49	0.42	0.23	0.54	0.36	0.3	0.35	0.25	0.17	0.2		0.25	1	0.94	0.87	-0.16	
SocCom_A	0.44	0.39	0.16	0.51	0.33	0.3	0.34	0.19		0.14		0.31	0.94	1	0.65	-0.21	
SocCom_O	0.46	0.37	0.28	0.48	0.32	0.24	0.29	0.28	0.29	0.24	0.13	0.1	0.87	0.65	1		0.11
SocDes			0.13				-0.14		0.15	0.13	0.25	-0.11	-0.16	-0.21		1	0.23
NCS	0.2	0.16	0.22	0.11				0.2	0.29	0.1	0.19	-0.13			0.11	0.23	1

Note. Pearson's *r* is displayed in cells reaching significance ($p_{FDR} < .05$). Non-significant correlations are displayed as empty white cells.

General Discussion

Across six studies, I iteratively defined, operationalized, and tested a 17-item self-report scale measuring individual differences in the novel construct, Narrative Referencing: The conscious propensity to reference familiar stories in daily life. The scale comprises three subscales measuring the propensity to refer to fictional stories, autobiographical stories, and

internalized narratives about others and cultural values. In two US-population-representative samples (N_{total} = 847), these subscales were found to be moderately correlated and to contribute unique information about how an individual references stories. The subscales were also found in both samples to contribute to a moderate (Study 6) to strong (Study 5) general Narrative Referencing factor, providing evidence that fictional stories, self-stories, and social-cultural stories (e.g., vicarious memories, cultural master narratives) all can function as scaffolding structures for navigating uncertainty.

Fiction Referencing

Fiction Referencing captures the propensity to refer specifically to fictional stories and characters to guide meaning- and decision-making. The Fiction Referencing subscale had the highest factor loadings and strongest internal reliability of the Narrative Referencing Scale's subscales across two samples. This strong construct validity and internal reliability could be due to the items' specificity and high face validity: The concept of a fictional story is fairly concrete and familiar to most people (unlike, for instance, the concept of a cultural master narrative, which is more abstract and technical), and the five items of the Fiction Referencing subscale describe particular ways that one might apply this easily understood story form to one's own life. It is unlikely that this subscale's strong factor loadings and internal reliability are due to some individuals engaging with fiction intensively while others engage with it very little without many individuals falling in between: The response distribution was found to be unimodal and approximately normal with no evident floor or ceiling effects.

While existing constructs describe experiences that are *conducive* to changes of perspective and opinion during immersion into fictional stories (e.g., transportation, self-other overlap with fictional characters, character identification, parasocial interaction) or

asynchronously (e.g., retrospective imaginative involvement, parasocial attachment/relationships), Fiction Referencing is the first construct that, to my knowledge, describes how people apply their experiences with fiction to their real lives purposefully, intentionally, and with self-awareness. In theory, Fiction Referencing builds on the aforementioned constructs as individuals with minimal meaningful connection to fiction would presumably be unlikely to be motivated consciously to use fictional stories as scaffolding in daily life. Indeed, Fiction Referencing was correlated with parasocial relationships, retrospective imaginative involvement, and fiction-related self-expansion. Nonetheless, Fiction Referencing appears to describe a distinct process, as demonstrated by the moderate strength of its correlations with measures of parasocial relationships, retrospective imaginative involvement, and fiction-related boundary expansion. Future research should explore the relationship between these constructs further by, for example, investigating whether Fiction Referencing moderates the relationships between transportability and behavioral change following exposure to fiction.

Self-Story Referencing

Self-Story Referencing builds on ideas developed in the literature on narrative identity to describe the propensity to use autobiographical story episodes or life-story narratives to define identity and guide decision-making. While self-story referencing is distinct from fiction and social template referencing (as evidenced especially by the second-order factor loadings of Self-Story Referencing being good but weaker than those of Fiction or Social Template Referencing), the relationship between Self-Story Referencing and the other subscales of the Narrative Referencing Scale (e.g., subscale correlation strength, presence of a moderate general factor) supports the idea that referring to stories about other people (real, abstract, or fictional) bears notable similarity to referring to stories about oneself.

Some of the six items of the subscale are conceptually very similar to existing constructs like narrative identity awareness (Hallford & Mellor, 2017), autobiographical reasoning in narrative identity (Lind et al., 2025), and desire for narrative structure (Lind et al., 2025). This is because the practice of constructing a self-story to which one might refer in daily life is itself a process of referring to memories from one's own life that might not yet have a clean narrative structure but are nonetheless at least story-like already (Bluck & Habermas, 2000; Schank & Abelson, 1995). Past work has found that it is more common to have episodic self-stories than to have a full life-story narrative (Akers & Saucier, 2021), but episodic self-stories and cohesive full life stories are both components of narrative selfhood. I wished to include the use of both episodic and full life stories under the umbrella of Self-Story Referencing; as such, I included some items that address the propensity to refer to episodic stories/events to create a bigger life story (an identity-construction and meaning-making process in and of itself) along with some items that address the propensity to refer to a higher-order life story to cover a wider range of related experiences. For example, "I mentally organize my life events into a meaningful story" addresses the process of constructing a life story narrative, while "I make sense of my identity by reflecting on my life story" describes an experience that is likely only possible for individuals who already have a life story of some sort. Other items like "I reflect on key turning points in my life to guide my future decisions" fall in between, as key turning points could be episodic but awareness of them implies some degree of narrative structure to how one thinks about one's life without necessarily presupposing that the narrative has been honed into a full life story.

While conceptually these could be considered distinct processes, the Self-Story Referencing scale showed strong internal reliability and good factor loadings, as well as the most leptokurtic distribution of the Narrative Referencing subscales, indicating empirically that the

processes of referring to episodic self-stories and more all-encompassing life stories are closely related. The apparent similarities between the conceptual processes involved in Self-Story Referencing are underscored by the positive correlation between the Self-Story Referencing subscale and the Autobiographical Memory subscale of the NISE, supporting the convergent criterion validity of the Self-Story Referencing subscale. Despite the relatedness of these two measures, however, the correlation was moderate, suggesting that the overlap is partial rather than absolute, and that the reflective process described by the NISE-AR is both theoretically and empirically distinct from the present- and future-oriented uncertainty resolution process described by the Self-Story Referencing subscale. An interesting direction for future research would be to investigate this distinction further (e.g., whether differences in NISE-AR and Self-Story Referencing scores predict differences in written accounts of self-related meaning making, whether there are differences between the NISE-AR and the Self-Story Referencing subscale in predicting decision-making strategies).

Social Template Referencing

Social Template Referencing is the most abstract component of Narrative Referencing, describing the propensity to reflect on stories about specific or abstract real others as points of reference in daily life. The Social Template Referencing subscale comprises items related to vicarious memory (including something like narratively structured perceptions of others' identities), traditional wisdom, and cultural norms. At base, Social Template Referencing is a description of the use of cultural master narratives as a point of reference. Sometimes specific others serve as possible representatives of cultural master narratives via social comparison or something like it (as evidenced by the correlation between the Social Template Referencing subscale and the INCOM). Sometimes more abstract groups (e.g., previous generations, the

population creating and belonging to a particular culture) represent master narratives, and other times master narratives themselves serve as a direct point of reference.

While there are conceptual links between these ways of referencing cultural master narratives, there are also differences that are both theoretically and empirically apparent: The Social Template Referencing subscale had the weakest factor loadings, construct validity (as measured by AVE), and internal reliability of the three Narrative Referencing subscales. Despite these quantitative indicators of possible messiness,[8] though, other aspects of the subscale provide evidence supporting the theoretical relationship between them: The subscale's internal reliability was good, and the factor loadings, while weaker than the other two subscales', nonetheless indicate a well-defined factor.

Interestingly, the Social Template Referencing subscale's second-order loadings on a general factor were the strongest of the three Narrative Referencing subscales, indicating that Social Template Referencing is somewhat more closely related to the overall construct of Narrative Referencing than either Fiction Referencing or Self-Story Referencing. This can perhaps be explained by considering fiction and stories about the self as facets of overarching cultural master narratives: Cultural master narratives are composed of the abstracted aggregates of the personal narratives of the individuals in the population belonging to a given culture, and of the values and expectations of those individuals, which are often addressed in the fictional stories they tell. These relationships are bidirectional as well, since cultural master narratives influence the meaning individuals are likely to make from their own experiences in formulating self-stories

[8] Perhaps worth noting again here is the fact that, to my knowledge, no self-report scale measures of cultural master narrative awareness exist. In creating the Fiction Referencing and Self-Story Referencing items, I took inspiration from existing scales measuring closely related constructs like propensity to imagine playful counterfactuals to the events in fictional stories or the propensity to think about one's life as a story. In creating the Social Template Referencing subscale, I instead had to imagine what a measure of cultural master narrative awareness might look like, and base the items for the propensity to refer to those narratives on this imaginary scale.

(e.g., McLean et al., 2023; Syed & McLean, 2023), and fiction can serve a prescriptive function by communicating the collective's values and expectations.

Nonetheless, correlation and factor analyses demonstrate that Social Template Referencing is distinct from the other factors of Narrative Referencing: Fiction and self-story referencing should not therefore be considered more specific ways of refencing cultural master narratives, i.e., social templates. While fiction and self-stories are inevitably implicitly linked to cultural master narratives to at least some degree, people likely think about them in different ways, at different times, and to different effects. Future research should explore the ways in which Fiction and Self-Story Referencing notably diverge from Social Template Referencing. I would speculate that Social Template Referencing might be more directly related either to traditionalism or defining one's life explicitly in opposition to traditions than Fiction Referencing or Self-Story Referencing, for instance. Conversely, Fiction Referencing might be related more to self-exploration even when reflecting on fiction that contains traditional messaging, and Self-Story Referencing might be related to a more individualistic mentality than Social Template Referencing, which refers to a more explicitly communal perspective.

Limitations

Given the strong connections between storytelling and culture, it is important to note that my perspective on storytelling as a White US American undoubtedly influenced its definition and operationalization meaningfully. Story forms vary culturally, as do the roles of stories and storytelling in society. While I made efforts to include considerations of different storytelling forms and purposes in the development of the construct and scale, I undoubtably did not fully account for my implicit assumptions related to story linearity, protagonist-based storytelling, clear fiction/non-fiction divisions, individualized experiences of stories, and more. Further, while

I consulted laypeople and other researchers at different points in the development of the Narrative Referencing Scale, all were affiliated with North American institutions when I approached them for feedback, and most come from cultural backgrounds similar to my own. All participants in factor and validation analysis samples were likewise US residents (although not all were from the US). While these limitations do not negate the potential utility of the construct/scale to studying western/westernized (Thalmayer, 2025)[9] populations, the scale's utility in different contexts should be assessed before use, and modifications for use in different contexts should be strongly considered.

Additionally, while the present studies describe the Narrative Referencing Scale's psychometric properties and criterion validity, no data presented here address the scale's predictive validity. I have framed Narrative Referencing theoretically as a mechanism connecting exposure to stories and perspective/behavior change; however, this relationship has not been tested empirically.

Conclusion

Narrative Referencing is a novel construct that describes the propensity to use familiar fictional, autobiographical, and socio-cultural stories as points of reference for navigating daily life. The Narrative Referencing Scale is a psychometrically-sound self-report measure of reasonable length that quantifies individual differences in this propensity. The relationship

[9] I dislike the use of "western/westernized" in this context as it appears to me to ignore the presence of non-European cultures in the global west. North American First Nations researchers contribute extensively to the study of narrative psychology; while it is questionable to define "westernized" as "deriving from western European traditions" broadly, it seems especially inappropriate in discussions of storytelling. Even "deriving from western European traditions" seems simplistic, given the work done by, for example, Sámi scholars on this topic, who are from western Europe but whose relationship to the imperialist European cultures typically described as "western" is as a colonized rather than a colonizing population. Nonetheless, I have as yet not found an adequate alternative term.

between the subscales suggests that referring to fictional stories, self-stories, and master narratives are overlapping but distinct processes.

Beyond the measurement scale itself, this work makes two additional central contributions: First, it establishes a possible mechanism to explain established the connections between reflective involvement with stories (e.g., autobiographical reasoning, narrative transportation) and psychological changes (e.g., increased self-efficacy beliefs, behavior change). People learn from stories, whether those stories are immersive works of fiction, memories recounted by friends and family, abstract culture-defining master stories, or experiences from their own lives. The information learned from these stories provide templates for thinking about new situations, which might be particularly potent since narratives provide *contextualized* information that can help individuals make meaning of disorganized situations: If you are not certain what to do, a list of options might be overwhelming, whereas a story about what someone else like you did and what the outcomes were might provide meaningful structure.

The second contribution of the present work is evidence that the ways people use stories to make sense of their lives are similar across different types of stories. In other words, the story about what someone else like you did and what the outcomes were can be used for navigating uncertainty whether the story is fictional, about another real person, about a general principle for what one ought to do in this kind of situation, or about oneself in a past situation that resembles the present one. While future research should examine when, how, and to what effect different types of stories are used, the present work indicates that people broadly are conscious of using all of them to some degree. Lines of research addressing fictional media, narrative identity, vicarious memory, and culture are likely to be interconnected; exploring the points of overlap

that Narrative Referencing helps to illuminate could be an exciting way to connect numerous bodies of until-now largely disconnected literature in psychology.

Acknowledgements

I would like to thank David Condon for his contributions as my Supporting Area Project (for which Studies 1-3 were conducted) advisor and for his ongoing mentorship.

I would like to thank Sara Weston for her generous contribution of funds to recruit participants for Studies 5 and 6. I would also like to thank Sara Weston and Simran Johal for their advice about my factor analyses.

For their thoughtful and invaluable insights offered in Studies 1 and 2, I would like to thank to Jonathan Adler, Laura Akers, Jonathan Cook, Kristi Costabile, Melanie Green, Cameron Kay, Murat Kezer, Ethan Kross, David Lee, Raymond Mar, Marta Maslej, Kendall Mather, Dan McAdams, Daphna Oyserman, James Pennebaker, and Dillon Welindt.

CHAPTER 3: IDIOSYNCRATIC PERCEIVED SELF-CHARACTER SIMILARITY AND HOMOPHILY

A major boon of fiction is that, while it is in many ways *similar* to real life, it is not actually the *same* as real life. Interaction with fiction is commonly understood by psychologists to be a simulative practice, allowing us to experience situations, emotions, and personal qualities that we might not ordinarily have access to in the real world in a constructed low-stakes environment (Mar & Oatley, 2008). Participating in this kind of simulation is entertaining enough that many of us spend a lot of time doing it (Gabriel et al., 2016); it can be a relatively low-effort way of meeting some social needs (Gabriel et al., 2016; Gardner et al., 2005); and it can provide us with opportunities to reflect on and reframe our real lives in meaningful ways (Kuiken et al., 2014; Larsen & Seilman, 1988; Seilman & Larsen 1989). Prior work has found that people tend to find fiction particularly personally impactful when it includes characters who remind them of themselves (e.g., Cohen et al., 2015; De Graaf et al., 2012; Hoeken et al., 2016; Igartua, 2010; Tukachinsky & Tokunaga, 2013). Similarity is also a foundational aspect of connection with other real people (e.g., Laursen, 2017; Montoya & Horton, 2013; Shiota & Levenson, 2007), so this perhaps stands to reason, but it might also be worth interrogating further given that fiction is, again, not quite the same as reality: Interpersonal perception might work somewhat differently when the target is a real social partner than when the target is a fictional character. If consumers of fictional media are simulating experiences, might they also be simulating the similarity to fictional characters that affords them access to those simulated experiences — that is, interpretatively shaping fictional characters into more effective self-simulations? This is the central question posed in the present study.

A common implicit assumption in research on responses to fiction is that perceivers agree on the *facts* of how fictional characters are portrayed, and that differing responses to characters stem from different participant-level preferences. But is this really the case, or might there also be some perception-level differences that shape responses to characters? That people interpret fiction differently due to differences in perceptions might not be a central focus in most psychology research on responses to fiction, but it is taken more or less for granted in other fields. Literary analysis, for instance, is not a field that focuses primarily on reader-level differences in responses to fiction; rather, literary analysts engage meticulously with the contents of a piece of writing, using the facts of what is on the page to interpret and re-interpret works of fiction. It is undoubtedly the case that the people engaging in these analyses are biased in favor of certain interpretations by their own perspectives, but their intellectual contributions focus primarily not on analyzing themselves psychologically, but rather on finding ways to justify (or change) their preferred interpretations by finding evidence in the text that other readers might have overlooked or about which other readers might have made assumptions that merit further investigations. Critical theory is a popular approach to studies of fictional media for this reason: Feminist, queer, post-colonial, psychoanalytic, and other theories provide frames for analyzing texts (including books, films, poetry, plays, etc.) in novel ways by asking questions like, "Is there evidence in the *Star Wars* films suggesting that Luke Skywalker might be gay, and if so, how would his being gay affect how we interpret other elements of the films?" and, "Given that Marvel's portrayal of Asgardians is influenced by old Scandinavian religion and that Asgardians are presented as superhuman aliens, how should they be understood ethnically relative to humans in *The Avengers* and what does it mean for the film's themes related to imperialism?"

In the field of psychology, we focus commonly on these kinds of perception-level differences between individuals in real-life social situations. Psychological researchers have identified ways that human beings tend to interpret ambiguous others in ways that cohere with one's own schemas and identity concerns (e.g., self-anchoring, Tamir & Mitchell, 2010; the false-consensus effect, Ross et al., 1977). Further, thought-feeling inference accuracy (also known as empathic accuracy) research is conducted because we know that the biases that people bring to ambiguous social situations lead to inaccurate perceptions of others and can impact the quality of communication and relationships (Hall et al., 2009; Kezer et al., 2025).

It seems likely that people might similarly bring biases to their interpretations of fictional characters too, and that how one interprets information about characterization impacts how one experiences fictional characters (potentially above and beyond how agreed-upon facts about the characters influence their experiences). Indeed, social interpretation biases might be even *stronger* in perceptions of fictional characters than they are in perceptions of real people, since less factual information exists about most fictional characters than about real people. Additionally, while biased interpretation of a real person is meaningfully *inaccurate*, a biased interpretation of a fictional character might instead be the basis for a novel reading of that character (if evidence is found and analyzed), or simply a private mistake. And, if a private mistake is made about factual fictional characterization details, that mistake will at worst have no impact on the target of the interpretation (since, unlike real people, fictional characters cannot know or care about people perceptions of them) and at best might contribute to more personally rewarding engagement with the character.

Indeed, we know that people perceive fictional characters counter-factually in at least some specific circumstances: Namely, people whose social and belongingness needs are not

being met optimally in other ways sometimes intentionally re-interpret fictional characters by creating *headcanons*. Within fan communities, the term "headcanon" refers to an individual's personal interpretations of a character's identity, background, or relationship to other characters that are not explicitly confirmed in the character's source media (Miriam-Webster, n.d.; Mullis, 2019). Although psychological research on this phenomenon is very sparse, some work suggests that autistic and queer media consumers imagine favored characters as sharing these identities when characters that explicitly represent autistic and/or queer identity feel insufficiently resonant (Shafee, 2021). Further, performing "queer readings" (e.g., choosing to interpret Luke Skywalker as a gay man) can be a way of validating one's own orientation, cultivating a sense of community, and enhancing feelings of hope about one's own future for queer youth (Dajches, 2024). Other work has shown that lesbian, gay, and bisexual youth report stronger attachments to fictional characters than do their heterosexual peers, and are more likely than heterosexual teenagers to seek advice from fictional characters when real-life role models are scarce (Bond, 2018), so creating headcanons about the identities of favored characters might be a strategy for enhancing feelings of homophily that allow isolated minoritized individuals to interact more satisfyingly with fiction.

Further, while media representation of stigmatized identities is infamously limited (e.g., GLAAD Media, 2025; Quiros et al., 2020), this principle of imagining a character to be more similar to oneself might be an effective way to enhance homophily more broadly too. It is probably rare that most people encounter fictional characters who perfectly align with their self-concept across *all* the relevant dimensions that might facilitate identification (e.g., demographic features, personality, values, life experiences, social roles). Given that fictional characters' identities are theoretically at least as ambiguous as real people's if not more so, and that

consumers of fictional media connect homophilously with characters, it seems plausible that people might sometimes project aspects of themselves onto fictional characters. Different people might not only respond differently to the same character, but actually perceive characters differently from one another. Even if one is not a strongly engaged enough fan to create a headcanon about a character intentionally, one might nonetheless feel more connected to a character by perceiving a character as being more similar to the self without realizing that this perception might not be textually grounded or shared by others.

The present research investigates whether there is variability in perceptions of information about fictional characters that might be assumed to be unambiguous: demographic identity features (gender identity, race, sexual/romantic orientation, and neurotype). My first two research questions are therefore:

RQ1: Is there variability in perceptions of characters' identities?

RQ2: If so, to what extent is the variability due to perceiving characters' identities as being more similar to one's own identity?

I predict that there is variability (that is, that not all people perceive characters' identities the same way), and that people tend to perceive a given character's identity as being more similar to their own identities than how others might perceive the character. My third research question addresses the role of homophily in these potential perception-level differences:

RQ3: Does perceiving greater self-character identity similarity predict greater liking of the character?

I predict that perceiving more commonality between a fictional character's and one's own identities is associated with liking the character more. Additionally, I investigated two exploratory research questions that expand on the role of identity homophily:

RQ4a: Does perceived personality similarity with a character predict greater liking of the character above and beyond perceived identity similarity?

RQ4b: Does perceived general similarity predict greater liking above and beyond identity and personality similarity?

To capture a broadly representative sample of experiences of everyday engagement with fiction, I recruited a standard undergraduate sample rather than one of highly engaged fans. All the previous work of which I am aware that addresses headcanons/different "readings" of characters has recruited from fan communities. That sampling strategy is very informative for gaining insight into the reasons people engage creatively with fiction; however, recruiting more broadly for the present study rather than targeting highly engaged fans specifically allowed me to examine whether identity-driven interpretations occur outside intensive fan communities, and allowed for the inspection of these interpretations that might not be as deliberate or conscious as the interpretations reported in quantitative research asking engaged fans to introspect on why they intentionally reinterpret characters' identities.

Additionally, unlike in some previous work on similarity in which participants could choose the fictional characters they wanted to describe, I presented participants with a pre-determined set of stimulus characters to enable direct comparison of perceptions of characters across individuals. If the rates at which characters are perceived to have particular identities vary between demographic groups, differences can therefore be attributed to actual differences in perceptions (e.g., neurodivergent people are more likely than neurotypical people to perceive Character A as neurodivergent), rather than either relying on participants to accurately report differences between the source media's depiction of a character and their own interpretation or risking attributing differences in character preferences to character-level selection effects (e.g.,

neurodivergent people are more likely to choose to answer questions about Character A, who is explicitly neurodivergent, whereas most neurotypical people choose to answer questions about Character B, who is explicitly neurotypical).

Method

Participants

Participants were 513 undergraduate students recruited in exchange for partial fulfillment of a course requirement at a public North American University in the Pacific Northwest. Due to a participation recording error, 14 participants completed all or part of the study twice; these participants' second attempts at participation were dropped from the analyses. After these exclusions, the final sample consisted of 499 participants with ages ranging from 18 to 38 years (M_{age} = 19.48; SD_{age} = 1.87). Participants' genders, gender types, sexual/romantic orientations, races/ethnicities, and neurotypes are reported in Table 11.

Due to the small *n* of some of the identity groups, I created several umbrella categories by collecting the minority identities together so that they could be statistically contrasted to the majority identities. Participants who declined to provide information about themselves on any given identity category were excluded from analyses, resulting in a total *N* of 492 for those analyses. Participants who selected multiple identities for any of the categories in which they had the option of selecting more than one identity (i.e., gender, sexual/romantic orientation, race) were included in the minority group for that identity category. For identity categories for which "unsure" was a possible response (i.e., gender type, neurotype), participants who selected unsure were included in the minority group. The simplified groups consisted of male (*n* = 155), female

(*n* = 308), and non-binary[10] (*n* = 29) for gender; cisgender (*n* = 460) and trans*[11] (*n* = 32) for gender type; heterosexual (*n* = 342) and lesbian/gay/bisexual/asexual/other sexual minority groups (LGBA+; *n* = 152) for sexual orientation; White (*n* = 341) and People of Color (POC; *n* = 151) for race; and neurotypical (*n* = 283) and neurodivergent (*n* = 209) for neurotype.

Table 11

Full Sample Demographic Information

Identity	*n*	Identity	*n*
Gender		*Race/ethnicity*	
Male	156	Asian	37
Female	312	Black/African American	10
Nonbinary/third gender	4	Hispanic/Latine	27
Genderqueer/gender non-conforming	2	Middle Eastern/North African	3
Genderfluid	3	Pacific Islander/Native Hawaiian	2
Other	0	White	341
More than one selected	22	Other	3
		Prefer not to say	2
Gender type		More than one selected	74
Not transgender	477		
Transgender	10	*Neurotype*	
Unsure	11	Neurotypical	283
Prefer not to say	1	Maybe neurodivergent	81
		Neurodivergent	101
Sexual/romantic orientation		Not sure	34
Straight/heterosexual	342		
Gay/homosexual/lesbian	20		
Bisexual/pansexual	85		
Queer	11		
Other	2		
Prefer not to say	5		
More than one selected	34		

[10] "Non-binary" (with hyphen) here designates gender identities that are not exclusively man/male nor exclusively woman/female. This includes the gender identity "nonbinary" (no hyphen), but can also include multigender, genderfluid, agender, and third gender individuals.

[11] I use "trans*" as an umbrella term including all non-cisgender identities — that is, all experiences of gender in which an individual's gender identity does not strictly match the sex that individual was assigned at birth (e.g., men assigned male at birth; women assigned female at birth). Trans* can therefore include people who have a binary gender identity that does not match the sex they were assigned at birth (regardless of whether a given individual would describe themselves as transgender, transsexual, or something else), as well as people who have a gender identity that falls outside of binary gender categories either partially or fully (e.g., nonbinary, agender, and third gender individuals; genderfluid individuals; individuals who identify with more than one gender).

Note. Participants who self-described using more than one identity in each category in which multiple options could be selected (i.e., gender, sexual/romantic orientation, race/ethnicity) are counted only in "more than one selected;" they are *not* counted in the specific groups they selected. Participants counted in each group (other than "more than one selected") selected *only* that identity and no others.

Measures and Materials

Pilot Study: Fictional Media and Characters

In an unrelated study, 265 undergraduate participants at the same university reported their favorite fictional character and the piece of media from which the character originated. Several pieces of fictional media were mentioned by more than one participant; I used the six most popularly reported to create a list of pieces of fictional media of which most of our participants would be familiar with at least one. Those pieces of fictional media were *The Avengers*, *Gray's Anatomy*, *Harry Potter*, *New Girl*, *The Vampire Diaries*, and *Star Wars*. These piece of media were chosen for their demonstrated popularity without regard for their format, structure, genre, or characters, but it is worth noting that all are seriated franchises that are available in video form (although some have origins in other formats, e.g., *Harry Potter* novels, Marvel comics).

Next, a pilot study ($N = 421$, $M_{age} = 21.50$; $SD_{age} = 2.12$; 283 female; 278 White) was conducted to establish the best characters for investigation from those pieces of media among the undergraduate participant pool. Participation in the pilot study was restricted to those who were familiar enough with at least one piece of media from the list of six to be able to answer some basic questions about the characters. Participants were asked which piece of media from the list six they were the most familiar with; they were shown questions only about that one piece of media. The were asked to report the character they most identified with, the character they most

admired, the character they most loved to hate, the character they most disliked, and the character they found most memorable.

Frequency of character mentions were calculated within each superlative category (e.g., most-identified-with characters, most love-to-hate character), as well as aggregated across all categories. More frequently mentioned characters across all categories were prioritized for the main study because they would be the most likely to resonate with participants in some way. However, some characters (e.g., Draco Malfoy, Darth Vader/Anakin Skywalker) who were mentioned frequently in one category (e.g., love-to-hate) but not across all categories in aggregate were also selected for the character pool to ensure more variety. A list of all the characters used can be found in Table 12.

Table 12

Fictional Media and Characters Used as Stimuli

Media and Characters	
The Avengers (*n* = 129)	*New Girl* (*n* = 101)
Tony Stark/Iron Man	Jessica Day
Peter Parker/Spiderman	Winston Schmidt
Natasha Romanoff/Black Widow	Nick Miller
Loki	Cece Parekh
Grey's Anatomy (*n* = 75)	*Vampire Diaries* (*n* = 43)
Meredith Grey	Caroline Forbes
George O'Malley	Bonnie Bennett
Derek Shepherd	Damon Salvatore
Cristina Yang	Stefan Salvatore
Harry Potter (*n* = 109)	*Star Wars* (*n* = 42)
Harry Potter	Luke Skywalker
Hermione Granger	Leia Organa
Ron Weasley	Han Solo
Draco Malfoy	Anakin Skywalker/Darth Vader

Note. The *n* for each media represents the number of participants who chose that media/character set about which to answer questions

Fictional Media and Character Selection

In the main study, a list of the six pieces of fictional media were presented to participants, along with the list of four characters from each. Participants were asked which piece of media and character set they were the most familiar with. They were then shown surveys about only the four characters from the piece of media they selected.

Character Identity Perceptions

Participants in the main study were asked about their perceptions of each of the four characters' gender, race/ethnicity, and romantic and/or sexual identity. For each of these identity categories, participants could select more than one identity (e.g., a participant might describe a character as White and Black). Participants were also asked whether they perceived each character to be transgender, and whether they perceived each character to be neurodivergent. For these identity categories, participants could only select one identity (e.g., only cisgender), since theoretically each category is mutually exclusive with the other (e.g., one cannot be neurotypical if one is neurodivergent). Perceptions of characters were sorted into the same majority/minority groups for gender, gender type, sexual/romantic orientation, race/ethnicity, and neurotype into which participants were sorted.

Identity Minoritization Index

A minoritization index was assigned to each participant and to each participant's perception of a character's identity. This index provides a 0-5 measure of how many minoritized identities a participant has/a character is perceived to have, with 5 indicting that the participant/character is minoritized on all five identity categories and 0 indicating that the participant/character is not minoritized on any identity category. Participants and characters were given 0s for the identities of cisgender, heterosexual, White, and neurotypical, and 1s for the

identities of trans*, LGBA+, POC, and neurodivergent. Gender was scored as a composite of two ratings since it has three rather than two categories: Gender minoritization[12] was evaluated using the metrics "Is this gender identity minoritized on the basis of being non-male?" (male = 0, non-male = 1) and "Is this gender identity minoritized on basis of being non-binary? (binary = 0, non-binary = 1). These two descriptions were then averaged such that male was assigned 0 (male and binary), female was assigned 0.5 (non-male and binary), and non-binary was assigned 1 (neither male nor binary); this was done so that gender would not outweigh other identity categories, as it would if the two metrics (male vs. non-male, binary vs. non-binary) were included separately such that gender would comprise two scores out of six rather than one score out of five. The mean participant minoritization index score was $M = 1.48$ ($SD = 1.13$); the mean character minoritization index score was $M = 0.79$ ($SD = 0.88$).

Overall Identity Differences Between Self and Perception of Characters

The degree to which participants' perceptions of each of the characters' identities from their chosen franchise were similar to or different from their own identities was measured by calculating Gower's distances (Gower, 1971) between a participant's own identity and their perception of a character's identity using all five identity categories. Majority/minority groups for the five identity categories were used to calculate Gower's distances. The minimum possible distance is 0.00 (representing total similarity between a participant's own identity and their perception of a given character's identity), and the maximum possible score was 1.00 (representing total dissimilarity between a participant's own identity and their perception of a

[12] In the case of gender, "marginalization" is perhaps a more accurate description than "minoritization," as male and female exist in approximately equal proportions the general population, and there were more female participants in this sample than male participants. I use the term "minoritization" for the sake of consistency.

given character's identity).[13] Mean self-character Gower's distance was $M = .32$ ($SD = .23$). Participants with missing data on any of the identity categories for self were excluded from Gower's distance analyses; participants missing data about their perception of a character's identity on any of the identity categories were excluded from Gower's distance analyses about that character.

Self and Character Personality Perceptions

Participants rated the degree to which 40 personality traits (most drawn from Chander, 2018; see Table 13) described themselves and each of the four fictional characters from their selected franchise on a 7-point scale for how accurately (1 = Extremely inaccurate, 7 = Extremely accurate). Traits were selected that one might plausibly be able to assess in oneself and fictional characters from a range of media types, that covered a reasonably wide range of personality attributes, and that spanned a number of different personality facets. Words were pilot tested by seven research assistants for self ratings and character ratings prior to data collection, and words were assessed post-hoc for reading level: All trait words used were between a 2nd and 9th grade reading level (Google, 2026) and should therefore have been interpretable to a university undergraduate sample.

[13] Because the data included five identity categories, Gower's distance in the dataset increases by increments of .20. A participant who perceived a character's identity as overlapping entirely with their own on all five categories would have a Gower's distance of .00; a participant who perceived a character's identity as overlapping with their own on four categories and differing on one category would have a Gower's distance of .20; overlapping on three categories and differing on two would yield a Gower's distance of .40, etc.

Table 13

Personality Traits Rated for Self and Character Descriptive Accuracy

Traits			
Adventurous	Eccentric	Irresponsible	Persistent
Aggressive	Emotional	Lazy	Popular
Anxious	Enthusiastic	Lonely	Rebellious
Awkward	Forgetful	Loyal	Reliable
Blunt	Helpful	Mischievous	Sociable
Boring	Honest	Observant	Stern
Brave	Humorous	Opinionated	Stubborn
Calm	Impulsive	Open-minded	Tough
Cautious	Independent	Optimistic	Trustful
Creative	Intelligent	Passive	Warm

Self–Character Personality Perception Differences

Difference scores between participants' personality trait self ratings and ratings of characters were created using Euclidean distances (i.e., the absolute value of the distance between two points represented in *n*-dimensional space) using the formula

$$d(self, character) = \sqrt{(self_{T1} - character_{T1})^2 + (self_{T2} - character_{T2})^2 + \cdots + (self_{Tn} - character_{Tn})^2}$$

(Tabak, 2014, p. 150). Unlike Gower's distance, Euclidean distance is intended for numeric-only data, which was appropriate for numeric ratings of trait descriptiveness.[14]

[14] Manhattan distances would provide a difference index for numeric data that is more similar to Gower's distances, as both Manhattan and Gower's distances increase at consistent increments with more differences, where larger differences are represented on the same scale as smaller differences. Euclidean distances, by contrast, provide a straight-line/hypotenuse measure of distance, such that larger differences are represented on a smaller scale than smaller distances.

I used Gower's distances for identity category data because I have no theoretical reason to suspect that adding more differences on demographic identity features compresses the feeling of difference: In other words, I chose to represent a character-participant pair that differed on the basis of gender, sexual/romantic orientation, and race/ethnicity as three times more distant than a character-participant pair that differed only on the basis of gender. Whether identity differences are actually experienced additively this way is an empirical question than I am not currently equipped to address; I chose to represent the data this way because it is simple and, I believe, makes fewer assumptions than representing them differently.

By contrast, I chose to represent personality differences using Euclidean distances rather than Manhattan differences 1) because Euclidean distances are more commonly used in social-personality psychology research to represent personality differences (e.g., Barrett & Eysenck, 1984) than Manhattan distances, and 2) because I suspect theoretically that personality traits are experienced more nebulously than demographic identity features, such that

Euclidean trait distance scores represent the distance between self ratings (1-7 scale) on all traits in 40-dimensional space (one dimension per trait) and character ratings on all traits in the same space. The theoretical minimum possible score (i.e., the smallest distance, least difference, and greatest similarity between self and character across all traits) for trait difference scores was 0.00; this was computed by creating a dataset in which self and character ratings were identical for all traits). The theoretical maximum possible score (i.e., the largest distance, most difference, and least similarity between self and character across all traits) was 37.95; this was computed by creating a dataset in which self and character ratings were opposite for all traits (e.g., trait ratings with $M_{self} = 1$ and $M_{character} = 7$). The mean self-character personality Euclidean distance for participants in the study was $M = 13.00$ ($SD = 3.48$).

If a participant completed trait ratings for a target (self or a given character) and was missing up to two trait ratings (5%) for that target, the missing value was imputed by filling in the mean rating for that trait for that target; there were 17 instances in which this occurred. There were two instances in which more than two trait ratings were missing for a given target; in these cases, the participant's rating for that target was dropped (if the target was a character). If all of a participant's trait ratings had to be dropped (i.e., if the target was the participant/the missing values were self ratings), the participant's data would have been dropped in full; however, there were no such cases in the data, so no trait ratings were dropped on this basis.

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smaller differences would be experienced relatively clearly whereas larger differences would be experienced simply as large differences regardless of the specific magnitude of the large difference. I speculate, for instance, that a participant who perceives a character to have near-perfect overlap with their own personality would appraise that character as being more meaningfully similar to themselves than they would appraise a character with whom they feel they have slight personality differences, whereas a participant would perceive both a character who has total personality differences from themselves and a character who has mostly very different but some slight personality similarities with a character as being essentially extremely different from themselves. Euclidean distances provide a better representation of this assumed compression of larger personality differences than Manhattan distances.

Overall Similarity of Characters to Self

Participants were asked how similar each character was to them with respect to six categories: life experiences, personality, interpersonal relationships, current challenges, goals, and identity. Each similarity category was rated on a 7-point scale from "character is completely unlike me" to "character is completely like me."

The mean of the six similarity items was calculated to create a perceived similarity scale for each character, with lower scores representing less perceived similarity and higher score representing more perceived similarity. Cronbach's alphas ranged across characters from .81 to .90. The mean overall self-character perceived similarity was $M = 3.09$ ($SD = 1.28$).

Liking of Characters

Participants were asked how much they liked or disliked each character (7-point scale, 1 = "dislike a great deal" to 7 = "like a great deal"). The mean character liking rating was $M = 5.75$ ($SD = 1.31$).

Data Analysis

All data were analyzed in R (R Core Team, 2023). Some code was written and/or streamlined with the assistance of the generative AI chatbot Claude (Anthropic, 2026); the chatbot had no access to data; I provided precise direction, and I reviewed and edited all the chatbot's suggestions.

Procedure

First, participants were asked to provide demographic information about themselves. Then, they were presented with the list of six pieces of fictional media, as well as the four characters from that piece of fictional media about whom they could be asked questions; they were asked to select the piece of fictional media with which they felt they were most familiar.

Following this, they responded to the demographic questions, and the opinions of characters questions for one of the four characters, then the next character, and so on in random order until they had responded for all four characters. They were then asked if there was another fictional character from any piece of fictional media to whom they had a particular attachment (e.g., a favorite character, a role model, a character they strongly relate to). If they answered yes, they were asked the same questions about that character that they had been asked about the pre-selected characters; 182 participants chose to evaluate an optional, self-selected fifth character (evaluations of these characters are not addressed in the present study because differences in perceptions of the same character between participants cannot be assessed).

Results

RQ1: Variability in Character Identity Perceptions

My first research question was: ***Is there variability in perceptions of characters' identities (e.g., do all participants agree with one another about each character's gender, gender type, race/ethnicity, orientation, and neurotype)?*** I addressed this question by inspecting descriptive statistics about how individual characters are perceived to determine whether there were perception-level differences in how individual characters were perceived. Specifically, I investigated whether there was a consensus among participants about the identities of each individual character. If there was a consensus, I would interpret the character to be considered definitively to have a particular identity among participants (even if a small number of individual participants disagreed with the consensus). If there was a lack of consensus, it would indicate that different participants had different perceptions about the same character — i.e., there was perception-level variance about that character.

I established the criteria for consensus character perceptions *a priori* as follows: 1) If 95% or more participants who answered questions about a given character agreed on whether the character had a majority or minority identity, there was a strong consensus about the character (the 95% cutoff was chosen by analogy with conventional statistical thresholds for significance, such that a character was considered to have a consensus perception if fewer than 5% of participants disagreed with the majority perception). 2) If between 90% and 94.99% of participants who answered questions about a given character agreed on whether the character had a majority or minority identity, there was a moderate consensus about the character. 3) If fewer than 90% of participants who answered questions about a given character agreed on whether the character had a majority or minority identity, there was lack of consensus about the character's identity.

Gender

Participants showed a strong consensus about characters' genders, with 15 characters being described as male by more than 97% of perceivers, and 8 described as female by more than 97% of perceivers. There was a lack of consensus about only one character: Loki from *The Avengers*, who was described as male by 84.25% of perceivers and non-binary by 15.75% of perceivers.

Gender Type

As was the case for gender, dominant opinions were clear for gender type, with more than 96% of participants reporting that 23 of the 24 pre-selected characters were cisgender — a strong consensus. There was again a lack of consensus about one character (Loki, *The Avengers*), who was described as cisgender by 80.82% of participants who rated the character.

Sexual/Romantic Orientation

Opinions on individual characters' sexual/romantic orientations were heterogeneous. The mean percentage of participants perceiving a given character as heterosexual was 89.06% (*SD* = 11.42%). The modal response for all characters was the majority identity, i.e., heterosexual; 11 characters were described by at least 95.00% of perceivers as heterosexual (strong consensus). An additional three characters were described as heterosexual by between 90.00% and 94.99% of perceivers (moderate consensus). This left ten characters about whom no consensus was reached, being described by less than 90.00% of perceivers as heterosexual. Among these ten characters, the median percentage of perceivers describing a given character as heterosexual was 82.33%, and the character with the most disagreement (Loki, *The Avengers*) was perceived as heterosexual by 55.12% of perceivers. Perceivers were not in complete agreement about each of these ten characters' specific orientations (e.g., no consensus was reached among the 55.12% of participants who perceived Loki to be non-heterosexual about whether Loki is gay, bisexual, asexual, etc.).

Race/Ethnicity

Participants were generally in strong agreement with one another about characters' races/ethnicities, with 17 of 24 characters being described as White by at least 95.00% of perceivers, and three characters being described as POC by at least 95.00% of perceivers (indicating a strong consensus for about 20 characters). However, for the three characters described overwhelmingly as POC, perceivers were not always in agreement about the specific racial/ethnic identities of characters. An additional two characters were described as White by at least 92% of perceivers (moderate consensus). Perceivers disagreed most notably on two

characters: Winston Schmidt from *New Girl,* who was described by 58.42% of perceivers as White,[15] and Loki from *The Avengers*, who was described as White by 85.83% of perceivers.

Neurotype

Opinions on individual characters' neurotypes varied: The mean percentage of participants perceiving a given character as neurotypical was 74.56% (*SD* = 15.70%). Notably, strong consensus was not reached about any character's neurotype. The modal response for 21 of the 24 pre-selected characters was the majority identity, i.e., neurotypical. Of those 21, a moderate consensus was reached that six characters were neurotypical. The modal response for three characters was the minority identity, i.e., neurodivergent. All of those three (*New Girl*'s Jessica Day, Winston Schmidt, and Nick Miller) were described by between 50.01% and 60.00% of perceivers as neurodivergent.

Conclusion

Across many identity categories, perceptions of individual characters were not homogeneous. Particularly for sexual/romantic orientation and neurotype, participants showed substantial variability in their perceptions of characters' identities. Greater consensus was reached for characters' genders, gender types, and whether their race/ethnicity was White.

[15] Inspecting participants' written free responses about the character, I suspect that the high disagreement stemmed from uncertainty about which character participants were being asked to describe: The series *New Girl* includes two characters of different apparent races/ethnicities with the first name Winston, so participants who described the character as White might have been describing the character Winston Schmidt (who typically goes by Schmidt), while participants who described the characters as Black/African American might have been describing the character Winston Bishop (who typically goes by Winston). Since I am focused on individual perceptions of characters, Winston Schmidt will be included in all analyses except when explicitly noted. White participants were not proportionally more or less likely than participants of color to perceive the character as White, $\chi^2(1, N=103) = 0.01$, $p = .903$, so it is unlikely that participant race influenced perceptions either of the character's race or of whether participants assumed they were being asked to describe Winston Schmidt or Winston Bishop.

RQ2: Identity Projection

My second research question was: ***To what extent is the variability in perceptions of characters' identities due to participants perceiving characters' identities as being more similar to their own (i.e., are participants projecting their own identities onto fictional characters)?*** To address this question, I conducted a linear mixed-effects model[16] using the lmerTest() package (Kuznetsova et al., 2022). The model predicted the magnitude of characters' perceived identity minoritization from the magnitude of participants' identity minoritization. Random intercepts were included for participants, since each participant rated multiple characters (raising the question of whether some characters were more perceived as minoritized than other across participants), and for characters, since numerous participants rated the same characters (raising the question of whether some participants perceive characters as more minoritized than other participants do, regardless of which characters they rated — perhaps because of having chosen character sets containing characters who are more readily perceived as minoritized). All variables were standardized (*z*-scored) prior to analysis to ensure cohesiveness across this and subsequent models. Degrees of freedom were estimated using Satterthwaite's method.

The adjusted intraclass correlation (ICC) was .50, indicating that 50% of the variance in perceived character minoritization was attributable to the clustering structure, justifying the use of a mixed-effects approach. Variance decomposition revealed that participant variance accounted for 17% of the total variation (σ^2 = .16, *SD* = .41), indicating that certain participants

[16] The syntax for the model in R was lmer(character_minoritization_index_z ~ self_minoritization_index_z + (1 | participant) + (1 | character), data = headcanons), with character_minoritization_index_z being the *z*-scored index of how many minoritized identities characters were perceived as having on the five identity categories being investigated, and self_minoritization_index_z being the *z*-scored index of how many minoritized identities participants had.

perceived more characters to have more minoritized identities than other participants did. Character variance accounted for 33% (σ^2 = .32, *SD* = .57), indicating that certain characters were perceived by more participants as having more minoritized identities than other characters, regardless of which participant was rating them (suggesting that there is some stability in how characters' identities are perceived across most participants). The residual variance was σ^2 = .49 (*SD* = .70).

The model explained a total of 53% of the variance in perceived character identity minoritization (Conditional R^2 = .53), while the fixed effects of participant identity minoritization alone accounted for 7% (Marginal R^2 = .07). More minoritized identities among participants positively predicted perceiving characters as having more minoritized identities (β = .26, 95% *CI* = [.21, .31], *SE* = .02, $t(484.78) = 10.62$, $p < .001$). In other words, participants who had more minoritized identity features (i.e., non-male, non-binary, trans*, LGBA+, people of color, neurodivergent) were likelier to perceive characters to have more minoritized identity features as well. Conversely, participants with fewer minoritized identity features/more majority identity features (i.e., male, cisgender, heterosexual, White, and neurotypical) were likelier to perceive characters to have fewer minoritized identity features as well. Because of the inclusion of random intercepts for participant and character in this model, these differences can be attributed to perception-level differences: More minoritized participants generally perceived characters to be more minoritized, while less minoritized participants generally perceived the very same characters to be less minoritized (see Figure 8). This is consistent with my prediction that participants project their own identity onto characters in the sense that participants project more or less minoritization onto characters. However, no conclusions can be drawn from these results about projection of specific identity features.

Figure 8

Predicted Perceived Number of Minoritized Identities Held by Characters, by Number of Minoritized Identities Held by Participants



Note. Raw data points are displayed with random jitter (± 0.5) applied to both axes to reduce overplotting. Data points are constrained to a minimum of 0 and a maximum of 5 on both axes. The regression line and shaded 95% confidence interval reflect predicted numbers of perceived minoritized identities among characters from a linear mixed-effects model estimated using the ggeffects package (Lüdecke, 2018), accounting for random intercepts for participant and character.

Identity Projection: Specific Identity Categories

To investigate identity projection at a more granular level (that is, if people project specific minoritized/majority identities onto characters), I conducted 13 logistic mixed-effects

models predicting perceptions of characters as belonging to the minority or majority group for each identity category, with random intercepts included for participant and character. The 13 models included all nine permutations of each of the three gender groups compared to one another perceiving characters be each of the three gender groups (e.g., odds of a character being perceived as male by men vs. by women; odds of a character being perceived as female by men vs. by women; odds of a character being perceived as non-binary by men vs. by women), as well as one model each for gender type (i.e., odds of a character being perceived as trans* by trans* vs. cisgender participants), sexual/romantic orientation, race/ethnicity, and neurotype. To control for Type I error across the 13 models, a Bonferroni corrected alpha threshold of .004 (.05/13) was applied when evaluating statistical significance.

The ICCs (Table 14) generally do not justify the use of mixed-effects effects models for these analyses; I proceeded with mixed-effects models despite this to ensure that models could be compared to one another and to the model of overall minoritized identity.

Participants with more minoritized identities perceived characters as having more minoritized identities compared to how participants with fewer minoritized identities perceived the same characters. Further, non-binary participants perceived fewer characters as binary and more as non-binary compared to male or female participants; trans* and cisgender participants perceived characters to match their own gender type; LGBA+ and heterosexual participants perceived characters to match their own sexual/romantic orientation, and neurodivergent and neurotypical participants perceived characters to match their own neurotype. These results support my prediction that participants project their own genders, gender types, sexual/romantic orientations, and neurotypes onto fictional characters.

Participants with binary genders generally agreed on characters' genders, with male and female participants generally agreeing with one another about characters' genders being male or female, with no tendency to perceive characters as their own gender relative to one another but a tendency not to perceive characters as non-binary relative to non-binary participants. This suggests that male and female participants potentially projected binary-ness but not their own specific genders onto characters.

Participant minority or majority racial/ethnic group membership did not predict perceptions of characters' racial/ethnic identity in any way, suggesting that participants did not project their races/ethnicities onto the characters. Figures 9 and 10 show odds ratios (ORs) of perceptions of characters as having a given identity among one identity group of participants compared to another (e.g., White vs. POC perceptions of characters being POC).

Table 14

Odds Ratios Comparing Perceptions of Character Identity by Participant Identity

Identity Category	Perceived Character Identity	Participant Identity Comparison	OR	95% CI lower	95% CI upper	*SE*	*z*	*p*	Adjusted ICC	P. ICC	Ch. ICC
Gender	Male	Female v. Male	0.23	0.06	0.91	0.16	-2.09	.037	.97	.02	.95
		N-B v. Male	0.02	0.00	0.17	0.02	-3.60	< .001*	.95	.03	.92
		N-B v. Female	0.05	0.02	0.15	0.03	-5.29	< .001*	-	-	-
	Female	Female v. Male	46.1	1.60	1.33e3	79.0	2.23	.026	.99	.00	.99
		N-B v. Male	1.97	0.21	18.3	2.24	0.60	.550	0.99	.00	.99
		N-B v. Female	0.11	0.01	1.96	0.17	-1.50	.134	-	-	-
	Non-binary	Female v. Male	2.98	0.11	83.0	5.06	0.64	.519	.98	.91	.07
		N-B v. Male	1.79e8	8.35e4	3.84e11	7.01e8	4.86	< .001*	1.00	.74	.26
		N-B v. Female	34.3	2.98	394	42.7	2.84	<.001*	.65	.65	.00
Gender Type	Trans*	Trans* v. Cisgender	41.40	3.73	459	50.80	3.30	< .001*	.96	.93	.03
Sexual Orientation	LGBA+	LGBA+ v. Heterosexual	7.74	4.84	12.4	1.85	8.54	< .001*	.53	.21	.33
Race	POC	POC v. White	1.52	0.82	2.80	0.48	1.33	.184	.83	.10	.73
Neurotype	Neuro-divergent	Neurodiv. v. Neurotypical	3.54	2.55	4.93	0.60	7.52	< .001*	.42	.21	.20

Note. Odds ratios (ORs) and intraclass correlations (ICCs) for comparisons of perceptions of character identity by participant identity, with random intercepts included in each model for participant and character. The reference group for each comparison is listed second

in the Participant Identity Comparison column; male was the reference group in male/female and male/non-binary (here shortened to "N-B") comparisons while female was the reference group in female/non-binary comparisons; cisgender was the reference group for gender type; heterosexual for sexual/romantic orientation, White for race/ethnicity, and neurotypical for neurotype. ORs can therefore be read as "[first group] was [more/less] likely than [second group] to perceive characters as [identity]," with ORs greater than 1 indicating greater likelihood and ORs less than 1 indicating lower likelihood. For example, the OR of 1.83 for non-binary vs. male participants' perceptions of characters as female indicates that non-binary participants had 1.83 times the odds of perceiving a given character as female compared to male participants: Non-binary participants were significantly more likely to perceive a given character as female compared to male participants. Conversely, the OR of 0.22 for female vs. male participants' perceptions of characters as male indicates that female participants had 0.22 times the odds of perceiving a given character as male compared to male participants: Female participants were somewhat but not significantly less likely to perceive a given character as male compared to male participants.

Results addressing non-binary and trans* participants and character perceptions should be interpreted cautiously given the small number of non-binary and trans* participants and of instances of characters being perceived as non-binary or trans*.

No ICC values are reported for the comparison of female and non-binary participants' odds of perceiving characters as male or as female because the random effects of participant was 0; ICC therefore could not be computed for these models.

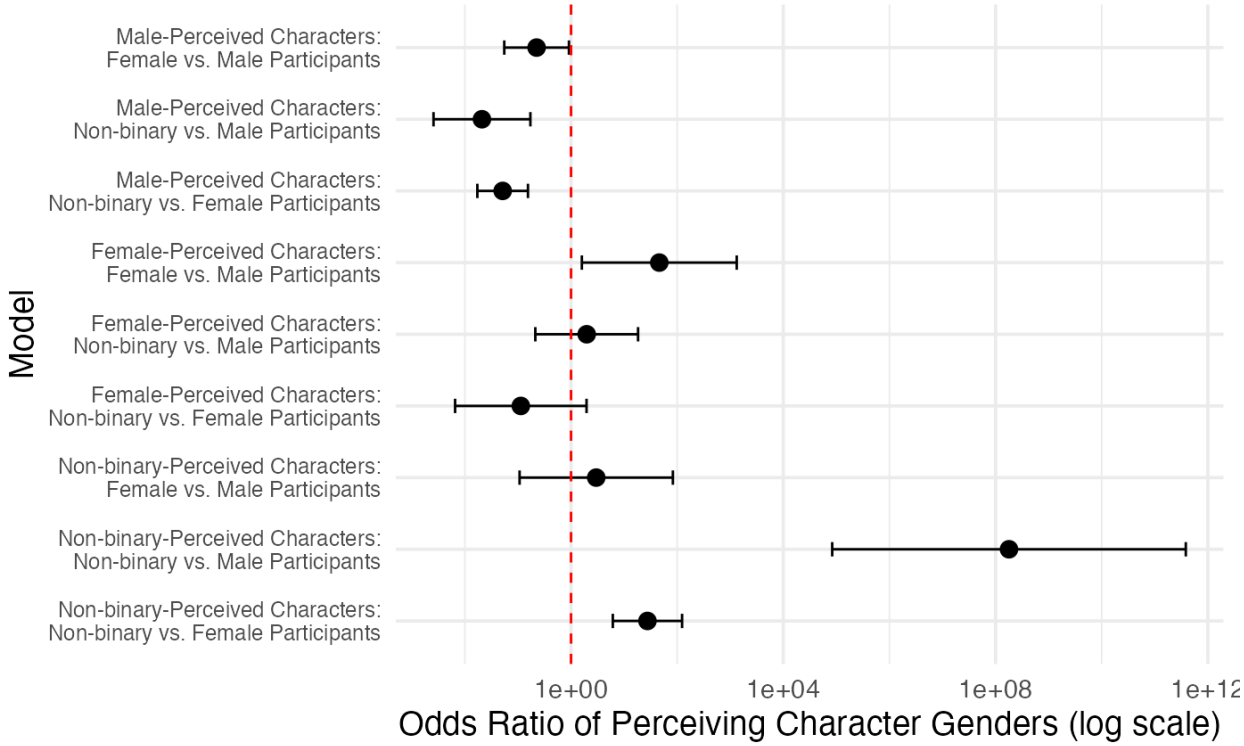
Several models failed to converge so optimizers were added: the bobyqa optimizer was used for the models comparing odds of perceiving characters as male between male/female and male/non-binary participants and comparing odds of perceiving characters as

male between male/female participants; the Nelder_Mead optimizer was used for the model comparing odds of perceiving characters as female between female/non-binary participants.

*$p < .004$, †$p < .01$

Figure 9

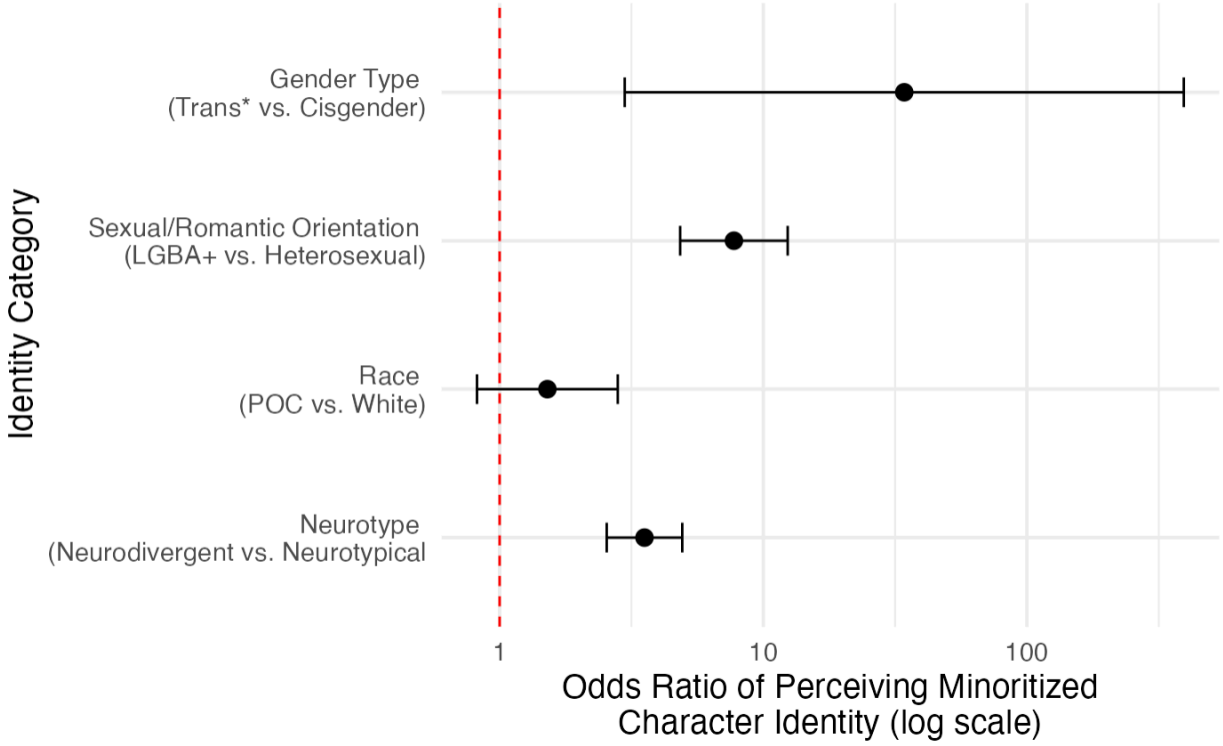
Odds Ratios of Perceptions of Characters as Male, Female, or Non-binary, by Participant Gender



Note. Odds ratios and 95% confidence intervals from logistic mixed-effects models predicting perception of characters as male, female, or non-binary from participant gender, for each pairwise comparison of participant gender (e.g., male participants perceptions vs. female participants' perceptions). The second participant gender listed in the comparison is the reference group. Random intercepts were included for participant and character. The dashed vertical line at OR = 1 indicates no difference in perception of character gender by participant gender. The *x*-axis is on a log scale. Models involving non-binary participants and perceptions of non-binary characters should be interpreted cautiously due to small non-binary sample size and few instances in the dataset of any characters being perceived as non-binary.

Figure 10

Odds Ratios of Perceptions of Characters as Minoritized in Different Identity Categories, by Participant Identity



Note. Odds ratios and 95% confidence intervals from logistic mixed-effects models predicting perceptions of characters as being minoritized in each identity category from participant minoritization on that same identity category. The second participant identity listed in the comparison is the reference group. Random intercepts were included for participant and character. The dashed vertical line at OR = 1 indicates no difference in perception of character identity by participant identity. Higher OR values represent greater odds that participants of the minoritized identity would perceive characters as minoritized compared to participants from the majority identity group. The *x*-axis is on a log scale.

RQ3: Perception of Shared Identity and Character Liking

My third research question was: ***Does perceiving more self-character identity similarity predict greater liking of a given character?*** To address this question, I conducted a linear mixed-effects model[17] predicting character liking ratings from perceived self-character identity distance (i.e., self-character Gower's distances for the five identity categories). Random intercepts were again included for both participants and characters. All variables were standardized (*z*-scored) prior to analysis to ensure cohesiveness across previous and subsequent models. Degrees of freedom were estimated using Satterthwaite's method.

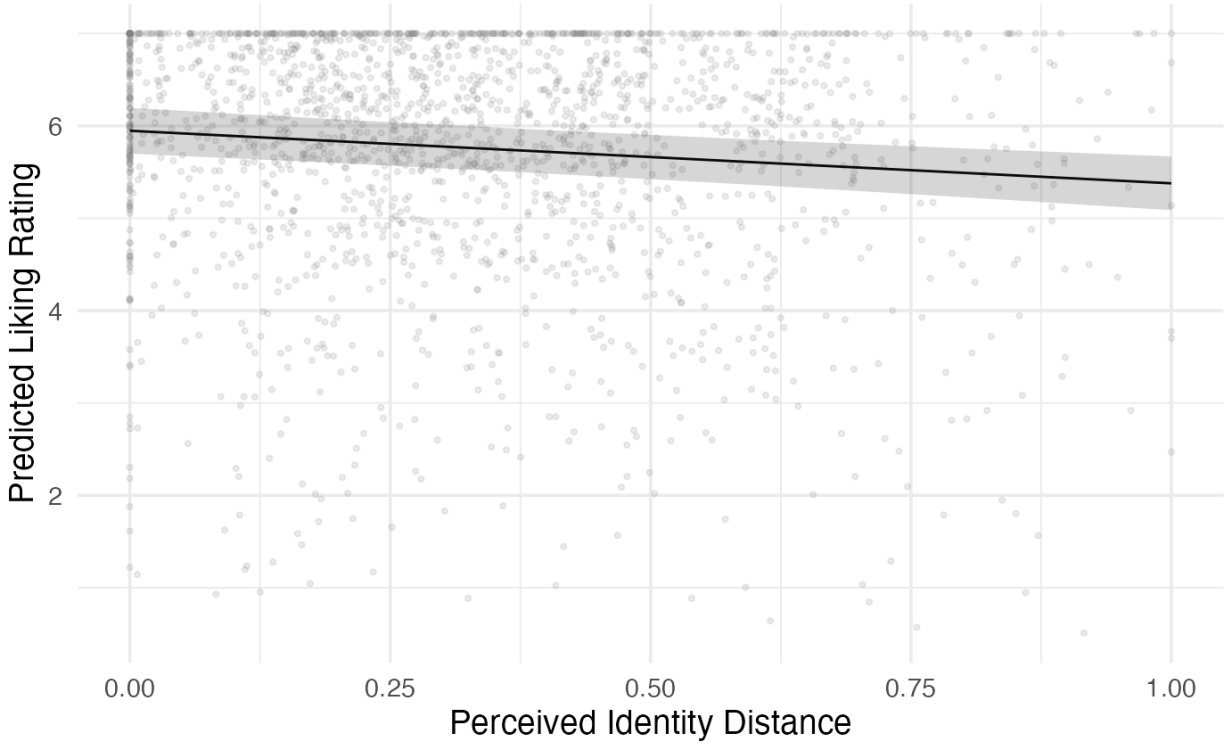
The adjusted ICC was .31, justifying the use of a mixed-effects approach. Variance decomposition revealed that participant variance accounted for 12% of the total variation (σ^2 = .12, *SD* = .34), indicating that certain participants generally liked the characters they rated more than other participants did. Character variance accounted for 19% (σ^2 = .19, *SD* = .43), indicating that certain characters were liked more than others across participants. The residual variance was σ^2 = .68 (*SD* = .82).

The model explained a total of 32% of the variance in character liking ratings (Conditional R^2 = .32), while perceived self-character distance alone accounted for 1% (Marginal R^2 = .01). As predicted, self-character identity distance significantly negatively predicted liking (β = -.10, 95% *CI* = [-.14, -.05], *SE* = .02, *t*(1535.20) = -4.41, $p < .001$), indicating that participants who perceived their identity to be more similar to a character's identity liked the character more, and participants who perceived their identity to be more different from a character's identity liked the character less (see Figure 11).

[17] The syntax for the model in R was lmer(liking_z ~ self-character_distance_z + (1 | participant) + (1 | character), data = headcanons), with liking being the *z*-scored liking ratings of characters and self-character_distance_z being the *z*-scored Gower's distance between the participant's identity and perceived character identity.

Figure 11

Predicted Ratings of Character Liking by Perceived Self-Character Identity Distance



Note. Predicted liking ratings across the range of self-perceived character identity Gower's distance (larger distance = less similarity; smaller distance = more similarity). Predicted values and 95% confidence intervals were estimated from a linear mixed-effects model using the ggeffects package (Lüdecke, 2018), accounting for random intercepts for participant and target. Both axes are in non-standardized units. Raw data points are displayed with random jitter (± 0.5 for liking, ± 0.1 for Gower's distances) applied to both axes to reduce overplotting. Data points are constrained to a minimum of 0 on both axes, a maximum of 1 on the *x*-axis, and a maximum of 7 on the *y*-axis.

Character Liking and Perception of Shared Specific Identity Category Membership

To investigate whether the perception of sharing *specific* identity categories with a character predicts greater liking of the character, I conducted linear mixed-effects models predicting liking from self-character identity matching on each individual identity category.[18] To control for Type I error across the seven models, a Bonferroni corrected alpha threshold of .01 (.05/5) was applied when evaluating statistical significance.

Adjusted ICCs of all models (.31 < ICCs < .33) justified the use of mixed-effects approaches. Across all models, participant variance accounted for 12% of the total variation (.11 < σ^2 < .12, .34 < *SD*s < .35); character variance accounted for 19-20% (σ^2s = .19, .43 < *SD*s < .44); and residual variance was between σ^2 = .67 and σ^2 = .68 (.82 < *SD*s < .83). Conditional R^2 for all models were .31 (race/ethnicity) or .32 (gender, gender type, sexual/romantic orientation neurotype), while marginal R^2s were smaller (.02 for gender, .005 for gender type, .011 for sexual/romantic orientation, .001 for race/ethnicity, and .006 for neurotype) indicating that each of the models explained a total of 31-33% of the variance in character liking ratings, and that the identities(/perceived identities) of participants and characters in each model alone accounted for between 0.1% and 2.0% of the variance in character liking ratings. The model results are summarized in Table 15.

[18] For example, the code used for the neurotype analysis was lmer(liking_z ~ character_neurotype*self_neurotype + (1 | paraticipant) + (1 | character), data = headcanons)

Table 15

Linear Mixed-Effects Models Predicting Liking of Characters by Participant Identity Group and Perceived Character Identity

Identity Category	Model	*β*	95% CI lower	95% CI upper	*SE*	*df*	*t*	*p*
Gender	**Participant:** Female (v. Male)	0.07	-0.07	0.21	.07	768	0.97	.334
	Participant: N-B (v. Male)	-0.33	-0.59	-0.07	.13	868	-2.51	.012†
	Character: Female (v. Male)	-0.12	-0.48	0.24	.18	71.7	-0.66	.512
	Character: N-B (v. Male)	-0.43	-1.04	0.17	.31	1908	-1.41	.159
	Interaction: Female Character : Female Participant	0.29	0.07	0.51	.11	1523	2.58	.010*
	Interaction: N-B Character : Female Participant	0.98	0.19	1.77	.40	1925	2.43	.015†
	Interaction: Female Character : N-B Participant	0.44	0.06	0.82	.19	1581	2.29	.022†
	Interaction: N-B Character : N-B Participant	1.35	0.52	2.18	.42	1916	3.20	.001*
Gender Type	**Participant:** Trans* (v. Cisgender)	-0.30	-0.50	-0.09	.10	555	-2.86	.004*
	Character: Trans* (v. Cisgender)	-0.03	-0.33	0.27	.15	1928	-0.22	.824
	Interaction: Participant : Character	0.58	0.03	1.13	.28	1898	2.07	.029†
Sexual Orientation	**Participant:** LGBA+ (v. Heterosexual)	-0.20	-0.31	-0.09	.06	613	-3.41	< .001*
	Character: LGBA+ (v. Heterosexual)	-0.13	-0.32	0.05	.09	1931	-1.42	.156
	Interaction: Participant : Character	0.52	0.27	0.76	.12	1927	4.17	< .001*
Race / Ethnicity	**Participant:** POC (v. White)	0.02	-0.09	0.13	.06	585	0.34	.736
	Character: POC (v. White)	0.05	-0.15	0.25	.10	1265	0.51	.611
	Interaction: Participant : Character	0.03	-0.21	0.26	.12	1853	0.21	.835
Neurotype	**Participant:** Neurodivergent (v. Neurotypical)	-0.14	-0.25	-0.03	.06	708	-2.46	.017†
	Character: Neurodivergent (v. Neurotypical)	0.03	-0.11	0.16	.06	1935	0.42	.676
	Interaction: Participant : Character	0.20	0.01	0.38	.09	1927	2.11	.035†

Note. Reference groups for each model are the majority group, noted in parentheses. Interaction terms describe whether the effect of character gender on liking differs for the non-reference group of participants compared to reference group raters, e.g., whether female participants' liking of perceived-female characters differs from male participants' liking of perceived-female targets (shown in the interaction Female Character : Female Participant). Non-binary is abbreviated as N-B.

*$p < .01$, †$p < .05$ ($p < .05$ is not considered significant with Bonferroni corrections)

Gender. Female participants did not like characters more or less than male participants, but non-binary participants liked characters marginally less than did male participants. Perceived character gender did not predict liking, with there being no significant differences between liking of male and female or male and non-binary characters. All interactions were significant or marginally significant (see Table 15 and Figure 13).

To further investigate the relationship between participant gender, perceived character gender, and liking, I conducted post-hoc pairwise comparisons of estimated marginal means with Bonferroni corrections (these analyses addressed questions e.g., do female participants like characters they perceive to be female more than male participants like characters they perceive to be female?). Significant and marginal results of these pairwise comparisons are reported in the text; non-significant non-marginal comparisons are omitted (although they are shown in Figure 13).

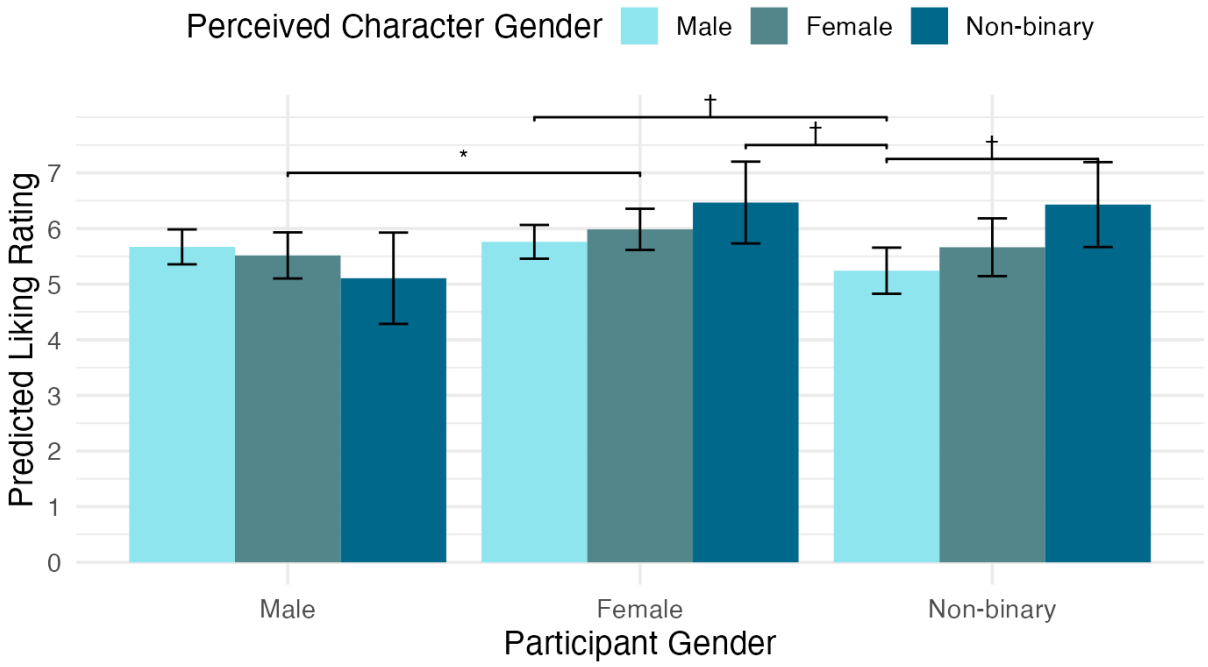
The post-hoc analyses revealed only one significant comparison: Female participants liked characters they perceived to be female more than male participants liked characters they perceived to be female ($\beta = 0.36$, $SE = .10$, $t(1664.7) = 3.48$, $p = .018$). This is shown in Figure 5 in the comparison between the middle bar (representing characters perceived to be female) of the first set of bars (representing male participants' liking of characters) and the second set of bars (representing female participants' liking of characters).

No other participant gender-character gender perception pairs differed significantly, but some other gender pair comparisons were marginal: Female participants liked characters they perceived to be male marginally more than non-binary participants liked characters they perceived to be male ($\beta = 0.40$, $SE = .13$, $t(898.0) = 3.16$, $p = .059$); female participants liked characters they perceived to be non-binary marginally more than non-binary participants liked

characters they perceived to be male(β = 0.94, *SE* = .30, t(1925.9) = 3.20, p = .051); and non-binary participants liked characters they perceived to be non-binary more than they liked characters they perceived to be male (β = 0.92, *SE* = .30, t(1842.4) = 3.08, p = .077).

Figure 12

Estimated Marginal Means of Non-Standardized Liking Ratings for Characters Perceived as Being Male, Female, or Non-binary, by Participant Gender



Note. Predicted means and 95% confidence intervals were estimated from a linear mixed-effects model using the emmeans package (Lenth & Piaskowski, 2026).

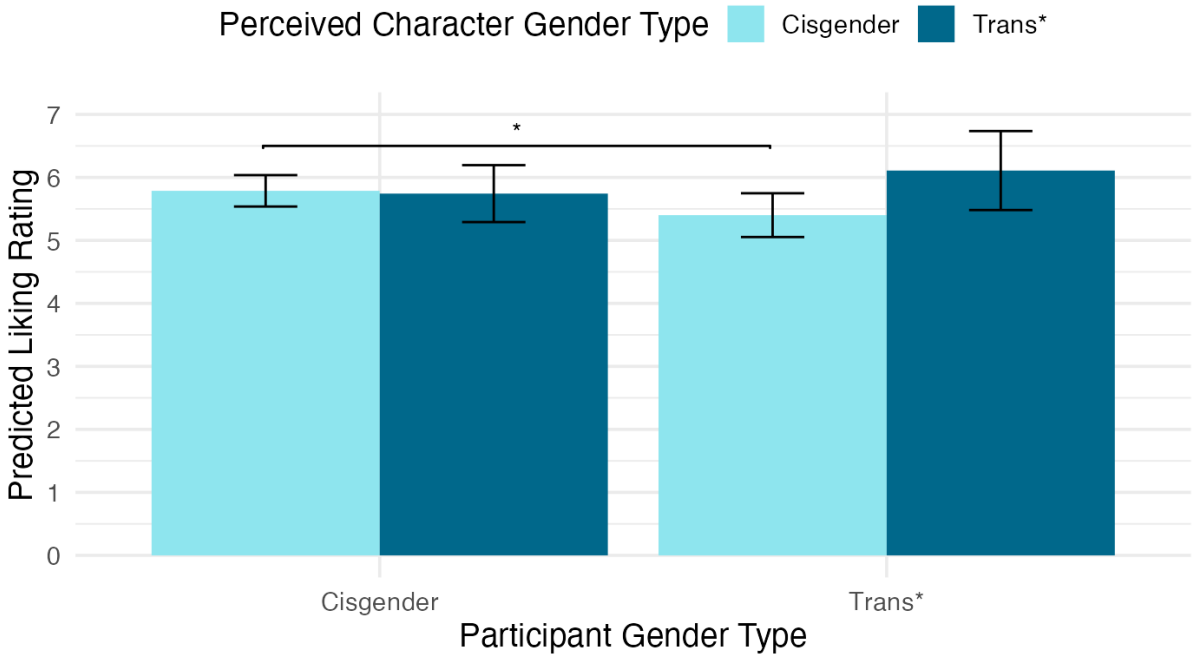
***p < .001, **p < .01, *p < .05, †p < .10.

Gender type. Trans* participants liked characters significantly less overall than did cisgender participants; characters perceived to be trans* were not liked more or less than characters perceived to be cisgender; there was a marginally significant interaction between participant gender type and perceived character gender type (see Table 15, Figure 13).

Specifically, post-hoc pairwise comparisons of estimated marginal means with Bonferroni corrections revealed that cisgender participants liked characters they perceived to be cisgender more than trans* participants liked characters they perceived to be cisgender ($\beta = 0.30$, $SE = .10$, $t(554) = 2.86$, $p = .027$). No other participant gender type-character gender type perception pairs differed significantly.

Figure 13

Estimated Marginal Means of Non-Standardized Liking Ratings for Characters' Perceived Gender Type, by Participant Gender Type



Note. Predicted means and 95% confidence intervals were estimated from a linear mixed-effects model using the emmeans package (Lenth & Piaskowski, 2026).

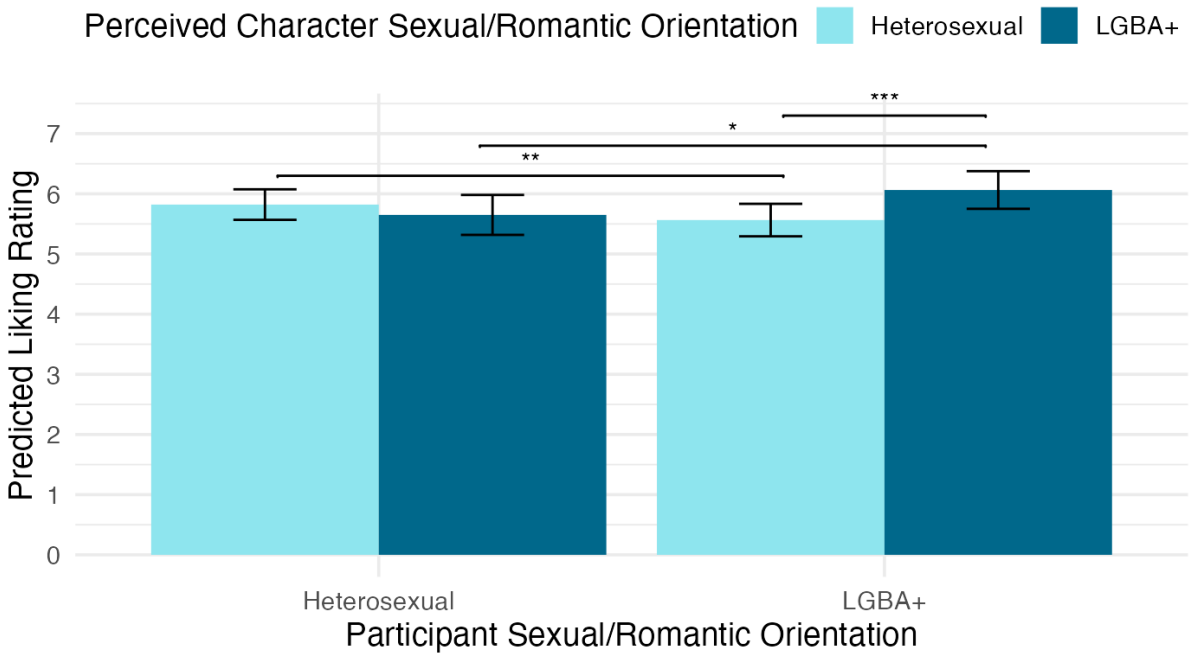
***$p < .001$, **$p < .01$, *$p < .05$, †$p < .10$.

Sexual/Romantic Orientation. LGBA+ participants liked characters significantly less overall than did heterosexual participants; characters perceived to be LGBA+ were not liked

more or less than characters perceived to be heterosexual; there was a significant interaction between participant sexual/romantic orientation and perceived character sexual/romantic orientation (see Table 15, Figure 14). Specifically, post-hoc pairwise comparisons of estimated marginal means with Bonferroni corrections revealed that heterosexual participants liked characters they perceived to be heterosexual more than LGBA+ participants liked characters they perceived to be heterosexual ($\beta = 0.20$, $SE = .06$, $t(612) = 3.41$, $p = .004$); LGBA+ participants liked characters they perceived to be LGBA+ more than heterosexual participants liked characters they perceived to be LGBA+ ($\beta = 0.32$, $SE = .12$, $t(1743) = 2.71$, $p = .041$); and LGBA+ participants liked characters they perceived to be LGBA+ more than characters they perceived to be heterosexual ($\beta = 0.39$, $SE = .09$, $t(1934) = 4.38$, $p < .001$). No other participant orientation-character orientation perception pairs differed significantly.

Figure 14

Estimated Marginal Means of Non-Standardized Liking Ratings for Characters' Perceived Sexual/Romantic Orientation, by Participant Sexual/Romantic Orientation



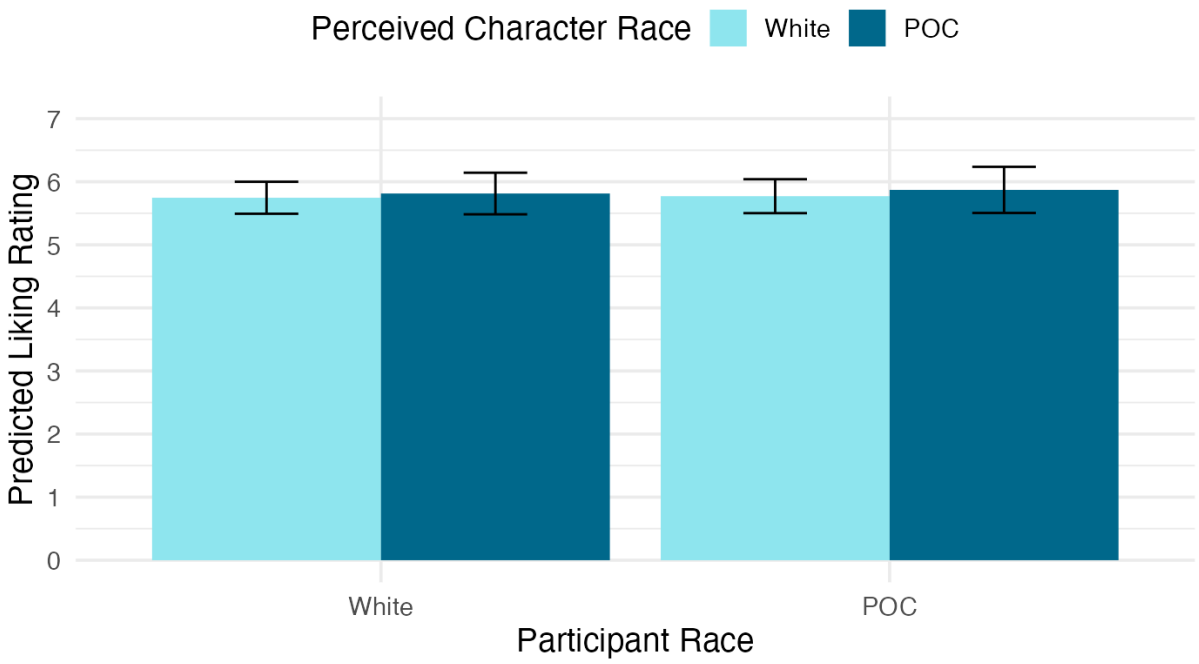
Note. Predicted means and 95% confidence intervals were estimated from a linear mixed-effects model using the emmeans package (Lenth & Piaskowski, 2026).

***$p < .001$, **$p < .01$, *$p < .05$, †$p < .10$.

Race. Participants of color did not like characters more or less than White participants; characters perceived to be POC were not liked more or less than characters perceived to be White; and there was no interaction between participant race and perceived character race (see Table 15, Figure 15).

Figure 15

Estimated Marginal Means of Non-Standardized Liking Ratings for Characters' Perceived Race/Ethnicity, by Participant Race/Ethnicity



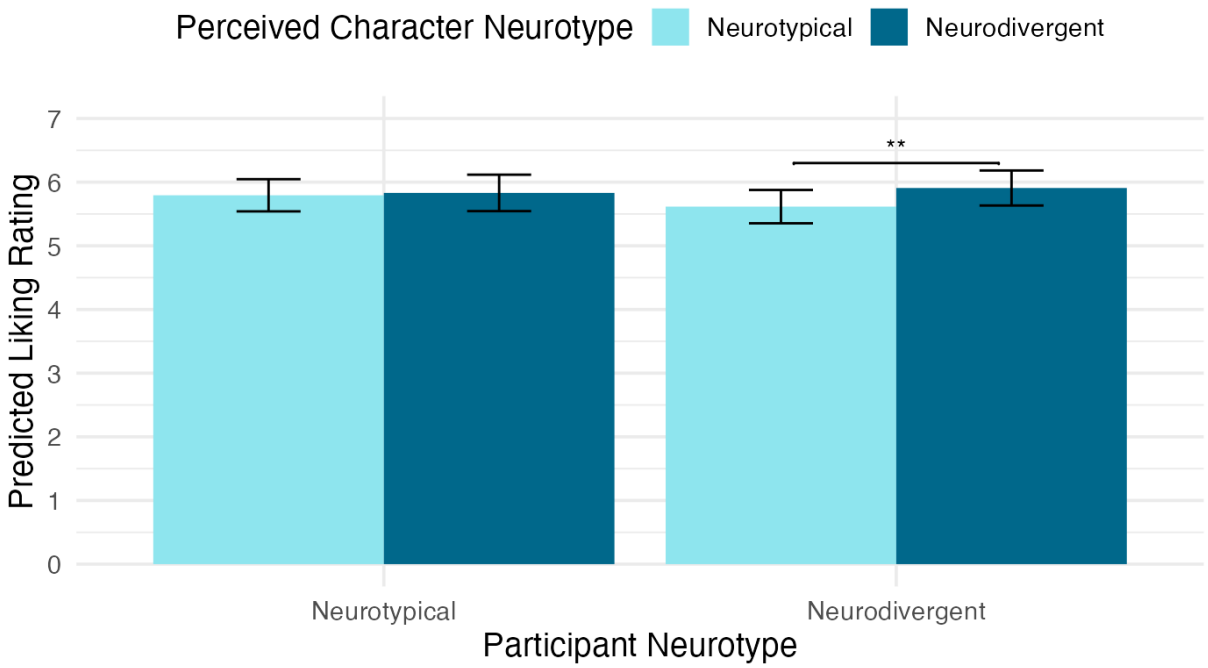
Note. Predicted means and 95% confidence intervals were estimated from a linear mixed-effects model using the emmeans package (Lenth & Piaskowski, 2026). ***$p < .001$, **$p < .01$, *$p < .05$, †$p < .10$.

Neurotype. Neurodivergent participants liked characters marginally less overall than did neurotypical participants; characters perceived to be neurodivergent were not liked more or less than characters perceived to be neurotypical; there was a marginal interaction between participant neurotype and perceived character neurotype (see Table 15, Figure 16). Specifically, post-hoc pairwise comparisons of estimated marginal means with Bonferroni corrections revealed that neurodivergent participants liked characters they perceived to be neurodivergent more than they liked characters they perceived to be neurotypical ($\beta = 0.23$, $SE = .07$, $t(1933) =$

3.35, $p = .005$); no other participant neurotype-character neurotype perception pairs differed significantly.

Figure 16

Estimated Marginal Means of Non-Standardized Liking Ratings for Characters' Perceived Neurotype, by Participant Neurotype



Note. Predicted means and 95% confidence intervals were estimated from a linear mixed-effects model using the emmeans package (Lenth & Piaskowski, 2026).

***$p < .001$, **$p < .01$, *$p < .05$, †$p < .10$.

Conclusions. Results show an overall pattern of participants of some minority groups liking the characters in this study less than the participants from the corresponding majority group liked the characters. This was the case for gender type and sexual/romantic orientation, and marginally for neurotype and gender (in the case of non-binary participants relative to male participants). There were no differences in liking of characters based on whether they were

perceived to belong to the minority or majority group when controlling for participant minoritization. There were some interactions between participant identity and perceived character identity, generally following a pattern of in-group preferences among minoritized participants: Participants who were minoritized on the basis of sexual/romantic orientation and neurotype liked characters they perceived to be similarly minoritized significantly more than they liked characters they perceived as belonging to the corresponding majority group. The same pattern held marginally and partially for gender, with non-binary participants liking characters they perceived to be non-binary marginally more than characters they perceived to be male but not more than characters they perceived to be female. Further, majority group participants liked perceived-majority group characters more than minoritized participants liked those same characters in the cases of gender type and sexual/romantic orientation, and minority group participants liked perceived-minority group characters more than majority group participants liked those same characters in the cases of sexual/romantic orientation and gender (with female participants considered minoritized relative to male participants). There were no significant effects of any kind in the analyses of liking and race/ethnicity.

RQ4: Additional Self-Character Similarity-Based Liking Predictors

My fourth research question had two parts: The first (RQ4a) was ***Does perceived personality similarity with a character predict greater liking of the character above and beyond perceived identity similarity?*** The second part (RQ4b) was the same, but added overall perceived similarity as a prospective predictor: ***Does perceived general similarity predict greater liking above and beyond identity and personality similarity?***

To address RQ4a and RQ4b, two additional models were fit building on the model predicting liking from perceived self-character identity similarity. The first additional model

added perceived self-character personality distance to the initial model;[19] the second added overall perceived similarity in addition to personality distance.[20]

RQ4a: Predicting Character Liking with Personality and Identity Similarity

In the first additional model predicting liking from perceived self-character identity and personality distances (which addressed RQ4a), the adjusted ICC was .31, with participant variance accounting for 14% of the total variation (σ^2 = .13, *SD* = .36) and character variance accounting for 18% (σ^2 = .17, *SD* = .41). The residual variance was σ^2 = .67 (*SD* = .82). This model explained a total of 32% of the variance in character liking ratings (Conditional R^2 = .32), while the fixed effects of the two predictors alone accounted for 2% (Marginal R^2 = .02). As in the previous model, self-character identity distance significantly negatively predicted liking (β = -.09, 95% *CI* = [-.14, -.05], *SE* = .02, t(1552.26) = -4.15, p < .001), indicating that perceived identity similarity predicted liking even when controlling for perceived personality similarity. Perceived personality distance also significantly negatively predicted liking (β = -.09, 95% *CI* = [-.13, -.04], *SE* = .02, t(1256.04) = -3.46, p < .001), indicating that participants who perceived more similarity between their own personality and the character's personality liked the character more, even when accounting for perceived identity similarity. A likelihood ratio test showed that the model including personality fit the data significantly better than the model without it (χ^2(1) =

[19] The syntax for the model in R was lmer(liking_z ~ self-character_distance_z + self-character_personality_z + (1 | participant) + (1 | character), data = headcanons), with liking being the *z*-scored liking ratings of characters, self-character_distance_z being the *z*-scored Gower's distance between the participant's identity and perceived character identity, and self-character_personality_z being the z-scored Euclidean distance between the participant's personality trait self-ratings and ratings of the character.

[20] The syntax for the model in R was lmer(liking_z ~ self-character_distance_z + self-character_personality_z + similarity_z + (1 | participant) + (1 | character), data = headcanons), with liking being the *z*-scored liking ratings of characters, self-character_distance_z being the *z*-scored Gower's distance between the participant's identity and perceived character identity, self-character_personality_z being the z-scored Euclidean distance between the participant's personality trait self-ratings and ratings of the character, and similarity_z being the *z*-scored overall self-character similarity scale score.

11.39, $p < .001$). Further, the model including personality showed a lower AIC (ΔAIC = -3.9), indicating a slightly more parsimonious fit of the model to the data.

RQ4a: Predicting Character Liking with Personality, Identity, and Overall Similarity

In the model adding overall perceived similarity to perceived identity and personality distances (which addressed RQ4b), the adjusted ICC was .32, with participant variance accounting for 17% of the total variance (σ^2 = .15, *SD* = .38) and character variance accounting for 16% (σ^2 = .14, *SD* = .37). The residual variance was σ^2 = .60 (*SD* = .78). This model explained a total of 39% of the variance in character liking ratings (Conditional R^2 = .39), while the fixed effects of the two predictors alone accounted for 10% (Marginal R^2 = .10). Again, self-character identity distance significantly negatively predicted liking (β = -.05, 95% *CI* = [-.09, -.01], *SE* = .02, $t(1581) = -2.22$, $p = .026$), indicating that perceived identity similarity predicted liking even when controlling for perceived personality and overall similarity. In this model, perceived personality distance no longer predicted liking (β = <-.01, 95% *CI* = [-.05, .05], *SE* = .02, $t(1255) = -0.124$, $p = .901$). However, overall perceived similarity significantly positively predicted liking (β = .30, 95% *CI* = [.25, .35], *SE* = .02, $t(1635) = 12.78$, $p < .001$): Perceived overall similarity predicted liking even when controlling for perceived identity and personality similarity. A likelihood ratio test showed that the model including overall perceived similarity fit the data significantly better than the model without it ($\chi^2(1) = 155.52$, $p < .001$), with a lower AIC (ΔAIC = -153.5), indicating a more parsimonious fit of the model to the data than the previous model. Given the improvement over previous models predicting liking and the larger effect of overall similarity relative to identity similarity, these results suggest that identity-based homophily is relatively weaker *on its own* than is homophily based on perception of similar life

experiences, values, and social roles (while perceived personality similarity is relatively unimportant on its own). A summary of the comparison of these models is shown in Table 16.

Table 16

Comparison of Linear Mixed-Effects Models Predicting Liking of Characters by Self-Character Differences/Similarities in Identity, Personality, and Overall

Model	*β*	95% CI (Lower)	95% CI (Upper)	*SE*	*df*	*t*	*p*	R^2 (cond.)	R^2 (marg.)	ΔAIC
Model 1								**.32**	**.01**	
Self-Character Identity Dist.	-.10	-.14	-.06	.02	1535	-4.41	<.001***			
Model 2								**.32**	**.02**	**-3.9**
Self-Character Identity Dist.	-.09	-.14	-.05	.02	1552	-4.15	<.001***			
Self-Character Personality Dist.	-.09	-.13	-.04	.02	1256	-3.46	<.001***			
Model 3								**.39**	**.10**	**-153.5**
Self-Character Identity Dist.	-.05	-.09	-.01	.02	1581	-2.22	.026*			
Self-Character Personality Dist.	<-.01	-.05	.05	.02	1255	-0.21	.901			
Overall Similarity	.30	.25	.35	.02	1635	12.78	<.001***			

Note. ΔAIC refers to the change in AIC compared to the previous model (e.g., Model 3 compared to Model 2). Random intercepts for participant and character are included in all models. Distance is abbreviated as "Dist."

***$p < .001$, **$p < .01$, *$p < .05$

Discussion

There were four goals in the present study. I will begin by summarizing those goals and the relevant results before interpreting them and discussing implications.

The first goal was to determine whether there is inter-individual variability in perceptions of fictional characters' identities (RQ1). I found support for the prediction that there would be variability, particularly in the case of sexual/romantic orientation and neurotype (and to some extent gender and gender type).

The second goal was to investigate whether these differences in character identity perception coincide with perceivers' own identities (RQ2). I found that they do coincide, broadly speaking: People with more minoritized identity features perceived characters to have more minoritized identity features too, while people with less minoritized identities perceived characters to have fewer minoritized identities. This was also primarily the case for more concealable identity features, with LGBA+ participants being more likely to perceive a given character as LGBA+ while heterosexual participants perceived the character as heterosexual, and neurodivergent participants being likelier to perceive a given character as neurodivergent while neurotypical participants perceived the character as neurotypical. Although the sample contained relatively few trans* and non-binary participants so results about those identity categories should be interpreted cautiously, the same pattern held for gender type, with trans* participants being likelier to perceive characters as trans* that cisgender participants perceived as cisgender, and to some extent for gender, with non-binary participants showing a propensity to perceive characters as non-binary that male and female participants perceived as having a binary gender.

The third goal was to investigate whether participants like characters more whose identities they perceived to be more similar to their own (RQ3). My results indicate that they do,

overall: Participants with minoritized and more concealable identities (i.e., LGBA+ and neurodivergent, to some extent non-binary and trans*) liked characters they perceived to have majority identities less than they liked characters they perceived to share specific minoritization with them.

The fourth goal was to elaborate on the role of perceived similarity to self in character liking by investigating whether perceived identity similarity predicted liking even when controlling for perceived overall similarity to characters (which itself predicted liking when controlling for perceived identity similarity) and perceived personality similarity (which did not predict liking above and beyond what perceived identity and overall similarity predicted). Results indicated that perceived identity similarity did indeed predict liking even when controlling for perceived personality and overall similarity. Conversely, perceived personality similarity did not predict liking when controlling for other forms of liking, but perceived overall similarity did. Indeed, perceived overall similarity predicted liking more strongly than did perceived identity similarity (although, again, both were predictors independent of one another).

These results suggest that perceptions of fictional characters are creatively constructed: Characters are not perceived or experienced the same way across all audiences; people bring aspects of themselves to their interpretations of characters — particularly characters they like more. This is true even for some core aspects of characters' identities which might be assumed to be concrete and not up to audience interpretation. However, there is notably less variability in perceptions of identity features that might be easier to make assumptions about at a glance, like binary gender and race (even when participants agree that a character is a person of color, though, they do not always agree on what the character's race is specifically).

Further, this effect was found in a convenience sample of undergraduate students who were not selected for inclusion on the basis of being dedicated fans of the medias used in this study. Prior research that has addressed variability in perceptions of fictional characters' or celebrities' identities has done so by recruiting participants who are strongly invested in being fans of those characters or celebrities, and has focused on conscious headcanons (e.g., Dajches et al., 2026; Dajches, & Stevens Aubrey, 2023; Shafee, 2021): fans' interpretations that have been intentionally constructed, and that they are aware might differ from most people's perceptions. The present work therefore provides evidence that perceptual differences between individuals are more widespread than might previously have been assumed: Relatively casual audiences have varying opinions about characters' identities, and people might not always be aware that their perceptions of characters' identities (that is to say, not all idiosyncratic perceptions are conscious headcanons). However, the present study did not ask participants to report how they believed others would perceive fictional characters, it is not definitively the case that some people do not realize their perceptions differ from others; only that people need not be asked about ways their perceptions of characters differ from others' for perceptual differences to be observed. The extent to which people are aware of the extent to which their perceptions of characters' identities varies from or aligns with others' perceptions is an important direction for future research. By investigating this question (Doyle et al., 2026; Doyle & Hodges, 2026), I aim to clarify the causes, possible use functions, and malleability of idiosyncratic perceptions of characters.

One possible explanation for the observed idiosyncratic perceptions of characters is self-anchoring biases (Tamir & Mitchell, 2010): Participants might have implicitly assumed that characters — especially characters they like — were similar to themselves, which might be the case among individuals in both majority and minoritized groups in any given identity category.

Future work should investigate this with a more diverse and identity-ambiguous set of stimulus characters than were used in the present study used, and focus directly on how characters' identities are defined in their source media.

Another possible explanation is that participants — particularly minoritized participants — decided intentionally to interpret certain characters as sharing identity features with themselves. Past qualitative research on dedicated fans' headcanons suggests that queer and neurodivergent people create headcanons about characters they like being queer or neurodivergent specifically as a way of strengthening their feelings of connection to those characters and to improve media representation of their own identities, if only in their own perceptions (Shafee, 2021). These kinds of headcanons could be a contributing factor in the results of the present study. Further, some participants might have brought pre-existing headcanons about characters into the study, while others might not have questioned some aspects of characters' identities prior to being asked about them but were prompted to consider the possibility that some characters might be minoritized by the questions in the study.

If headcanons partially or wholly explain perceptual differences of characters, it is interesting that perceptions of some identity categories varied more than others. Why would some types of identities be more readily assigned than others, if one is getting creative with characters' identities anyway? The degree to which an identity is concealable (Jackson & Mohr, 2016) might be one reason: Perhaps a character's sexual orientation and neurotype are perceived as more difficult for observers to "read," whereas it is assumed that a character's gender and race are more obvious at a glance. With this reasoning, a given character's gender and race might be seen as self-evident, while they might be regarded as being plausibly queer or neurodivergent even if they are not noted as such.

However, while some identities might be experienced on average as more or less concealable than others,[21] a recent study by Le Forestier and colleagues (2025) emphasizes that the extent to which an identity is concealable depends heavily on individual and context, such that labeling entire identity categories as more or less concealable is unlikely to be accurate. Perhaps a better description of the most variable identities from the present study might instead be that they tend to be discovered through experience, rather than inherited or assigned at birth. Because people are typically considered to be born with unchangeable racial identities, races/ethnicities might be taken for granted. Conversely, while sexual orientation and neurotype might or might not be determined at birth, they are not generally known until later in life. As such, people are typically assumed to be heterosexual and neurotypical until enough evidence compiles that they are in fact LGBA+ or neurodivergent. Similar to a real person's identity, a fictional character's race might therefore be seen as immutable while their sexual orientation and neurotype are seen as negotiable depending on whether there are clues that they do not hold the "default" identities in those categories.

Gender and gender type lie somewhere between race and sexual orientation/neurotype, since people can discover that their gender identity does not match their sex assigned at birth, but this is currently relatively uncommon so it might not occur to people to perceive characters as non-binary and/or trans*. Cisgender individuals in particular might not be familiar enough with the feelings and experiences common to non-binary and trans* self-discovery processes such that they might not be able to recognize them. Trans* — especially binary trans* — individuals

[21] Participants rated their own identities' concealability; mean concealability ratings were lowest for gender (indicating that gender was experienced as the least concealable identity measured in the study). Of the identities measured by Le Forestier et al. that I also measured, race was also rated low for concealability, followed by sexual orientation, which was rated as moderately concealable on average. Le Forestier did not measure gender type or neurotype.

might also prefer to perceive characters with whom they identify as cisgender, if they wish to imagine themselves as cisgender (e.g., a transgender man might identify with Peter Parker and prefer to perceive the character as a cisgender man so as to imagine himself as a cisgender man as well while watching *The Avengers*). It will be interesting in future research to probe the rationales people give for their perceptions of characters' identities to clarify this point.

Following from the previous point, it is possible that the clarity of evidence present about a character's identity in their source media influences perceptions, particularly when the evidence is subtle or ambiguous. The character Loki from *The Avengers* is of particular interest in exploring this explanation, given both that there was more disagreement among participants about Loki's sexual orientation, gender type, and gender than there was about any other character in the present study, and that Loki's sexual and gender identities are explicitly queer in (some) source media. In Marvel properties, Loki is sometimes presented as having a non-binary gender identity and being attracted to people of more than one gender. Loki also exists outside of Marvel as a god in Norse mythology who is notable for self-presentation and behavior that would be deemed queer on the basis of both gender and sexual orientation by modern definitions,[22] to the point that some scholars use varyingly gendered personal pronouns to refer to them (e.g., Vogt, 2024).

[22] Describing people and mythological figures from other periods using modern terms is fraught since physical sex, gender roles and presentation, and sexual experiences were conceptualized differently. In the poem *Lokasenna* from the *Poetic Edda*, Loki is described as *argr*: a Viking Age term with negative connotations describing incorrect, taboo gender performance ("unmanly" or "effeminate," for men). While a wide range of behaviors were considered *argr* in Viking Age culture, there was overlap with modern conceptualizations of male queerness, like dressing in clothing typically worn by women and engaging in some forms of sexual intercourse with men. Loki is noted in numerous stories as engaging in activities that were seen as *argr* that would likely be described as queer by most modern people: Also in *Lokasenna*, Loki is said to have spent eight years living as a woman and bearing children; in *Þrymskviða,* another poem from the *Poetic Edda*, Loki volunteers to dress as a woman and serve as a bridesmaid; in *Gylfaginning*, from the *Prose Edda*, Loki transforms into a mare in order to seduce a stallion as part of a trick, becomes pregnant, and gives birth to an eight-legged horse. Viewers of *The Avengers* who are not familiar with the comics or TV show in which the character Loki is presented as queer might nonetheless perceive him as queer if

While it is possible that some perceivers are aware of this and simply prefer to perceive Loki as cisgender and/or heterosexual, it seems equally plausible, if not more so, that the average audience member of Marvel Studios blockbuster films is not aware of this information. The intricacies of Norse mythology are not common knowledge in modern US culture, and within Marvel media, evidence of Loki's queerness is presented in some comic book issues and in the 2021 Disney+ television series *Loki* rather than in the major *The Avengers* films. Additionally, in the comics and television series, evidence of Loki's queerness is sometimes ambiguous and/or mentioned only subtly in passing.[23] Particularly attentive and motivated audiences might therefore notice the character's queerness, but less attentive and motivated audiences would probably perceive Loki as male (in alignment with actor Tom Hiddleston's gender) and heterosexual (a common default assumption, despite arguable queer-coding of the character even in the mainstream films). People who are aware of the character's queerness are therefore likely to be more engaged fans of *The Avengers* and related properties than the average audience member, and/or queer people who might be more motivated to seek out queer characters or attend to the presence of queer characters than are non-queer people.

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they were familiar with these stories about Norse god Loki, despite Norse god Loki's position outside of cultures that use the word "queer" to describe a specific constellation of gender and sexual identities.

[23] Following events in *Avengers: Disassembled*, the soul of typically-male Loki from Marvel's *Thor* comics was temporarily displaced into the body of Sif, a female character. Loki was shown in this form for several issues but was not necessarily described as identifying as a woman and Loki acknowledges that the body belongs to someone else. It is therefore ambiguous how the character's gender identity should be interpreted during this period. In a later Marvel comic series (*Agent of Asgard*), Loki is able to switch at will between male and female forms, and describes this as being possible because both are true aspects of themself, which is much closer to explicit genderfluidity (and/or perhaps sexfluidity, which is not a commonly used term since being able to switch one's physical sex back and forth is not generally achievable for human beings). In the comic series *Squirrel Girl,* Loki explicitly self-identifies as genderfluid and pansexual. Loki also flirts with both men and women in various comics series, sometimes while in male form, sometimes while in female form.

In the *Loki* television show, there are numerous versions of Loki who interact with one another. The main Loki is referred to exclusively with he/him pronouns, but on paperwork his sex is marked as "fluid." Most of the other Lokis appear to be male, although a prominent variant who goes by Sylvie uses a female form. In a scene in episode 3 in which the main Loki and Sylvie discuss their romantic histories, Sylvie says, "You're a prince; must have been would-be princesses — or perhaps another prince," to which Loki replies, "A bit of both; I suspect the same as you," suggesting that both characters are bisexual.

I do not have detailed knowledge of all characters used as stimuli in the present study so I cannot speak to the clarity of ambiguity of their identities in their source media. Nonetheless, it seems likely that Loki's overt genderqueerness — however ambiguous it might be — is responsible for a substantial proportion of the observed effects related to non-binary genders and trans* gender types. While small numbers of participants perceived other characters as non-binary or trans* (e.g., three participants perceived Peter Parker's gender as non-binary; four participants perceived Winston Schmidt as trans*), Loki was the only character included in the study about whose gender and gender type no consensus was reached. Similarly, while Loki was *not* the only character about whose sexual orientation no consensus was reached, a higher proportion of participants perceived Loki as LGBA+ than any other character. This suggests that, while some individuals might perceive any given character as non-binary and/or trans* and/or LGBA+ regardless of explicit support for their perceptions in the source media, more individuals who are theoretically open to perceiving characters as queer are more likely to do so if there is some basis for their perceptions provided in the source media (or perhaps elsewhere in culture).

This reasoning does not appear to hold for other identity categories, however. Characters who are overtly POC in their source media were not perceived with as much ambiguity as Loki was as a queer character, but there was a different sort of test-case character who can clarify how race was perceived: As noted in footnote in the Results, Winston Schmidt from *New Girl* was perceived by roughly 58% of perceivers as White and by roughly 42% as a person of color. This disagreement is likely due to ambiguity about which character "Winston Schmidt" refers to, as there is a Black character in *New Girl* named Winston Bishop who typically goes by Winston and a White character named Winston Schmidt who typically goes by Schmidt. Given this point of confusion, one might expect White participants to interpret the

questions as being about Winston Schmidt and therefore to report perceiving the character as White, while racialized participants would interpret the questions as being about Winston Bishop and therefore to report perceiving the character as being a person of color. This was not the case: There was no difference in perceptions of that character's race between White participants and participants of color. The differences in perceptions seem therefore to be due neither to differences in knowledge of the characters nor differences in readiness to perceive characters as POC when provided with plausible justification for doing so.

Many characters were also perceived by many participants as neurodivergent despite, to my knowledge, never being described as such in their source media. While I cannot claim confidently than *none* of the characters are noted in their sources as being neurodivergent, I am fairly confident that none of the characters from *Grey's Anatomy*, *Harry Potter*, or *Star Wars* have ever been explicitly described as such, despite many of them being perceived that way by a large number of participants. These results might speak to greater readiness to perceive characters as neurodivergent despite lack of evidence, or it might indicate that evidence of neurodivergence is more plentiful or ambiguously defined than evidence for queerness. It is also possible that being neurotypical was simply not regarded as the default in the present study's sample, while being heterosexual and cisgender were.

Regardless of the reason for it, it is notable in the present study that differences in perceptions of the identity categories used in the present study appear to be differently related to participants' familiarity with the details of the source media. Future research should investigate differences in perceptions of more characters who are known explicitly to hold different identities to clarify the role of knowledge of source media in perceptual differences. It will be important in future research to consider the specific cultural perceptions of the identity categories

used, and the vocabular used to describe different identities: The present study used terms tailored to the specific time period, region, and demographic from which the data were collected, but these terms might not be appropriate in different times, places, and groups. Further, it should not be expected that the specific ways in which characters' identities were perceived differently between participants in the present study would replicate in different populations, which might, for instance, view neurodivergence as a more niche and strictly clinically defined quality, or regard race as a less stable identity category.

Finally, while no conclusions can be drawn from the present study about the causal relationship between liking characters and homophilously projecting one's own identity onto them, the results comparing perceived identity and overall similarity do give some hints. Perceived overall similarity on the basis of life experiences, personality, interpersonal relationships, current challenges, goals, and identity (broadly defined) predicted liking more strongly than did perceived identity similarity. It is plausible that people gravitate to particular fictional characters on the basis of these overall similarities, since life experiences, interpersonal relationships, goals, etc. are often the direct focus of fictional stories. Either as a part of the process of developing an affinity for a character or as a consequence of it, an individual might then begin to see indications that the character also shares unaddressed identity features with them, and come to perceive the character as having that identity. For example, a neurodivergent individual might like a fictional character who struggles with social relationships and executive functioning because they identify with those struggles, and either assume that the character is intended to be neurodivergent or deliberately decide to "diagnose" the character informally as neurodivergent so as to strengthen the feeling of identification.

Implications

The broadest implication of the present work is that the identities fictional characters are perceived to have cannot be assumed to be consistent across perceivers. If some facets of a character's identity are ambiguous, it is likely that they will be perceived differently across individuals. Even if a character's identity is explicitly stated but easy to miss or ignore, it is likely that some individuals will miss or ignore it, whether deliberately or not. Based on this novel finding, fictional characters should be considered ambiguous perceptual targets unless there is clear evidence that perceivers agree about them. It is therefore likely that experiences of fictional characters and stories vary between individuals not only because of having different attitudes toward facts about characters that everyone agrees are facts, but also because of having different perceptions of what the facts about a character actually are.

This variability in perceptions is also non-random: People tend to perceive a given characters' identity as being more similar to their own than others tend to perceive the very same character. This is especially true when they like the character more. Because fictional characters are unaware of audiences' perceptions of them, they are unable to correct misperceptions of their identities. As such, individuals are freer to perceive them as having whatever identity appeals to them than they are to perceive real people's identities. Investigating differences in perceptions of fictional characters is therefore a very promising new direction for research addressing individual differences in the relationship between interpersonal perception and attraction, as perceptions of fictional characters vary substantially and might be subject to fewer constraints than perceptions of real people.

The present work also has meaningful implications for media representation of minoritized identities. It is possible that members of majority groups overlook the identities of

fictional characters when the character's creators intend the character's identity to be minoritized. This could be the case especially when the source media's description of the character's identity is easy to miss or ignore by virtue of being subtly declared, ambiguous, or rarely mentioned. Unless a character's identities are clear, consistent, and integral to how the character is presented, their minoritized identities might not be recognized or remembered by audiences with majority identities.

Conversely, though, minoritized individuals appear more likely either to notice suggestions that a character might have a minoritized identity that they share, or else to attribute a minoritized identity to a character even in the absence of evidence in the source media. Although many minoritized identities are underrepresented in fiction, minoritized individuals might create their own representation by engaging creatively with fictional characters. Projecting one's own identity onto liked characters might facilitate self-exploration beyond the opportunities afforded by limiting oneself to interacting parasocially with characters one likes but do not share one's own identity and/or with characters who share one's own identity but whom one does not otherwise find particularly easy to identify with or compelling. Indeed, there is some emerging evidence that idiosyncratically perceiving characters as minoritized via headcanons specifically might be associated with psychological adjustment among minoritized audiences (Dajches & Stevens Aubrey, 2023). Perceiving liked fictional characters as sharing minoritized aspects of one's own identity might signify or even facilitate self-acceptance.

That different identity categories are perceived with more and less variability also has some implications. If perceiving a character as sharing one's own identity is beneficial to well-being, doing so can only benefit those who engage creatively with the character's identity. Based on the present work, women and people of color appear rarely to project their own gender and

racial identities onto characters. This lack of identity projection combined with the disproportionate presence and agency of male and White characters compared to female and characters of color in media broadly (Bamman et al., 2024; Kejriwal & Nagaraj, 2024; Smith et al., 2016; Stuhler, 2024; Svaikovsky et al., 2018) — and indeed in the present study — suggest that it might be particularly difficult for women and people of color to see themselves represented in fictional narratives compared to queer and neurodivergent people (despite these groups also being underrepresented). Whether or not this is the case, as well as the impacts if it is true, should be investigated further.

Finally, the findings from the present study on identity might extend to other features of the self too — and indeed they likely do, given the apparent importance of perceived overall similarity (e.g., similarity of experiences, social roles). If projecting aspects of one's demographic identity onto liked characters does indeed have some benefits related to self-acceptance, belongingness, self-expansion, or a similar construct, it is possible that these benefits would extend to projecting other aspects of oneself (e.g., unusual or difficult-to-discuss experiences) onto characters as well.

GENERAL DISCUSSION

How do people use fictional media for self-change? The work presented here offers new insights into two parts of the process: People use familiar fictional stories as points of reference to help them navigate self-concept and situational uncertainty, and individuals have idiosyncratic perceptions of characters that differ predictably from one another in such a way as to align liked characters more closely with the self. These findings fit into a broader theoretical model describing fiction's role in self-construction by expanding our understanding of individual audience members' creative agency in consuming fiction: Fiction is not experienced entirely passively, with audiences' connections to it being entirely reliant on what the work of fiction itself brings to the table. Instead, people bring aspects of themselves to the characters they like, perceptually personalizing in ways that would, at least theoretically, make them more effective tools for self-exploration. Further, people report looking for parallels between fictional stories and their own lives so that they can apply takeaways from their simulated/fictional experiences to navigating uncertainties. Together, this work clarifies both some mechanisms by which fiction can be used *strategically* in processes related to self-construction, and why the same piece of fiction might make different impacts on different individuals, given that one's own perspective and real-world psychological needs appear to be prominent components of how individuals engage with fiction.

The novel construct Narrative Referencing and the associated scale developed in Chapter 2 demonstrates not only that people refer to fictional stories to guide real-life sense-making, but that there are individual differences in the propensity to do this. This finding might explain why fiction affects some people more strongly than others, and the Narrative Referencing Scale gives

us a starting point for being able to measure how conscious people are of the long-term influences of fiction on self-concept and behavior.

Furthermore, the relationship between Fiction Referencing and the other subscales of the Narrative Referencing Scale indicates that the propensity to refer to fictional stories in daily life resembles the propensity to refer to stories about one's own life and to stories about other people (specific or abstract). The structure of the scale suggests that narrative identity researchers and media psychologists stand to gain a great deal from engaging in more subject area cross-talk.

Additionally, because Fiction Referencing does not correlate perfectly with the other subscales in a general sample, future research should examine group differences in the strength of the relationship between the subscales. For example, I included an early version of the Narrative Referencing Scale in a study described briefly in Chapter 2 Study 4, and found that Fiction Referencing was significantly *positively* associated with being queer ($d = .47$, $p < .001$), while Social Template Referencing was significantly negatively associated with being queer ($d = -.34$ $p < .01$), and Self-Story Referencing was not significantly related to queerness.[24] This could be because social templates and master narratives tend to assume that a person is heterosexual and cisgender, so those kinds of stories are more relevant to cisgender heterosexual individuals than they are to queer individuals, who might need to look to more exploratory reference points like fiction to find meaningful self-scaffolding material.

To that point: Chapter 3 provides additional insight into why fiction might have particular appeal to queer individuals and people belonging to other minoritized groups. While groups that

[24] Other findings of interest from this exploratory analysis: Fiction Referencing was positively correlated with left-wing political attitudes ($r = .24$, $p < .001$) but subscales on the other subscales were not associated with political attitudes. Social Template Referencing ($r = -.30$ $p < .001$) and Self-Story Referencing ($r = -.17$ $p < .01$) were negatively correlated with age but Fiction Referencing was not.

are minoritized in real life tend also to be underrepresented in fiction, the results of the study presented in Chapter 3 indicate that queer (i.e., LGBA+ and/or trans*) and neurodivergent people read themselves into fictional stories, perceiving the same characters to be queer or neurodivergent that cisgender-heterosexual and neurotypical people perceive as cisgender-heterosexual and neurotypical. Fictional characters do not necessarily need to be presented explicitly as minoritized in their source media for audiences to connect with them explicitly on the basis of sharing a minoritized identity, because individual audience members not only perceive characters differently from one another, but they do so strategically. As such, a queer individual might connect with a character on the basis of *queer-coding* (that is, stereotypic qualities or allusions to cultural alternative queerness-based narratives that suggest that a character *might* be queer without being explicitly described as such) or of other real or aspirational similarities between themselves and the character, then "make" the character queer like themselves perceptually. Doing so might make them feel more closely connected to the character, and in turn might make them more likely to refer back to that character in the future when navigating real-life uncertainties when their cishet counterparts might look to peers or traditional wisdom instead.

Exploring this speculative process will be an exciting direction for future research to take, as will investigating the prevalence of perceptual differences about more features of fictional characters (e.g., birth order, religion, high school popularity). Very little psychological research has been conducted that explicitly or implicitly addresses individual differences in character perceptions, but it seems like a fruitful new direction. There are individual differences in interpersonal perceptions between real people, and these differences have consequences; there appear to be substantial individual differences in character perceptions, and those differences are

likely also to have consequences. Investigating both the effects on self-expansion of perceiving more self-similarly than how others perceive the character and the causes of perceiving characters self-similarly will no doubt lead to exciting new insights about how fiction relates to self-construction.

To conclude this section, I will return to the central research questions I posed in the General Introduction. First: ***When people are facing uncertainty about their real lives, do they refer to familiar fiction stories to help them navigate the uncertainty?*** Chapter 1 provides evidence that people do refer to fiction to navigate uncertainty, and that they are declaratively self-aware about doing this to at least some extent. Further, there are individual differences in the propensity to do this (or, at minimum, individual differences in the propensity to do so in a way that can be self-reported). The novel construct of Fiction Referencing, a sub-facet of Narrative Referencing, provides a way to describe this phenomenon. The Fiction Referencing subscale of the Narrative Referencing scale provides a way to measure different levels of this propensity between individuals efficiently and quantitatively.

Second: ***What do people do when a fictional character is similar to the self on some features, but a core aspect of the self that is relevant to identification and self-concept exploration is not shared with the character?*** Chapter 3 suggests that one way in which people might navigate a discrepancy between the "facts" of a fictional character and individual needs for the characters is by perceiving the character as more aligned with individual needs than how others might perceive the same character. People perceive characters they like more and who they feel are broadly similar to themselves as resembling on some specific identity categories as well, even when others perceive that same character differently. However, there are some limits to these perceptual differences: Less "visible" identities like sexual orientation, gender type, and

neurodivergence seem to be more likely to be perceived differently across individuals, while more "visible" identities like race and gender seem to be more consistently perceived across individuals, at least in the broadest strokes (i.e., people agree that a character is White or a person of color, but perhaps not the specific race of the character if the character is a POC; men and women agree if a character is a man or a woman, but people with non-binary genders might perceive characters' genders differently). Part of this research question remains unanswered, as the study presented in Chapter 3 does not directly address whether these differences in perceptions of characters bridge gaps between factual information about characters and what an individual needs from the characters to connect with them more effectively. Nonetheless, my work provides a strong basis for this hypothesized bridging effect.

Implications Summary

The work presented here has implications for several areas of study; notably, regarding the mechanisms of involvement with fiction, self-construction and identity development, diversity science, and psychological research methods. All of these have been discussed integratively to some extent already, but I will summarize and briefly expand upon the implications for each more directly in the following subsections.

Involvement with Fiction Mechanisms

My most explicit goal for this dissertation has been to clarify some mechanisms by which exposure to fiction causes long-term changes to the self. Specifically, I localized one gap between the self-exploration that might occur through simulated experiences while consuming fiction and enduring changes to self-perception and behavior, and another gap between past work showing the importance of self-character similarity to connection with fiction and the ambiguity in that past work about which similar features are most important to cultivate connection

(especially given that some past work shows that people who connect more strongly with fiction also sometimes have important experiences that are not often represented in it). I have already described the present work's contribution to filling those gaps; rather than addressing them again, I will use this subsection to connect my findings related to these separate gaps into a more unified picture.

I included an early version of the Narrative Referencing Scale in a study about parasocial relationships during the self-discovery and coming out process among LGBTQ+ people.[25] In this study, participants were also asked if they had ever had a headcanon (that is, an explicitly held perception about a character's identity or experience that is either unaddressed in or contradicted by the source media) about several fictional characters that had been meaningful to them at times of uncertainty. Fiction Referencing was significantly positively correlated with number of self-reported headcanons ($r = .23$ $p < .001$).[26] While this does not specify the cause or nature of the headcanons, the finding indicates that there is a connection between deliberate re-imagining of characters and the propensity to use fiction as scaffolding for navigating real life.

A likely explanation of this connection is that people who are more interested in fiction in general are also more likely to engage with it actively in numerous different ways. But there is no reason to suppose that the connection between headcanons and Fiction Referencing would be entirely due to this third investment-in-fiction variable. Indeed, it seems unlikely that the connection would be incidental, given my findings in Chapter 3 that perceptual personalizations

[25] This study was included in the sample from Chapter 2 Study 4. The sample for this PSR-and-queer-identity-development study alone had the following participant characteristics: $N = 304$; $M_{age} = 21.5$, $SD_{age} = 5.70$; 62% female, 23% male, 15% nonbinary or another gender; 59% White, 22% multiracial, 10% Latine or Hispanic, 5% East Asian, 2% Black, 2% other races/ethnicities; 58% heterosexual, 42% LGBA+.

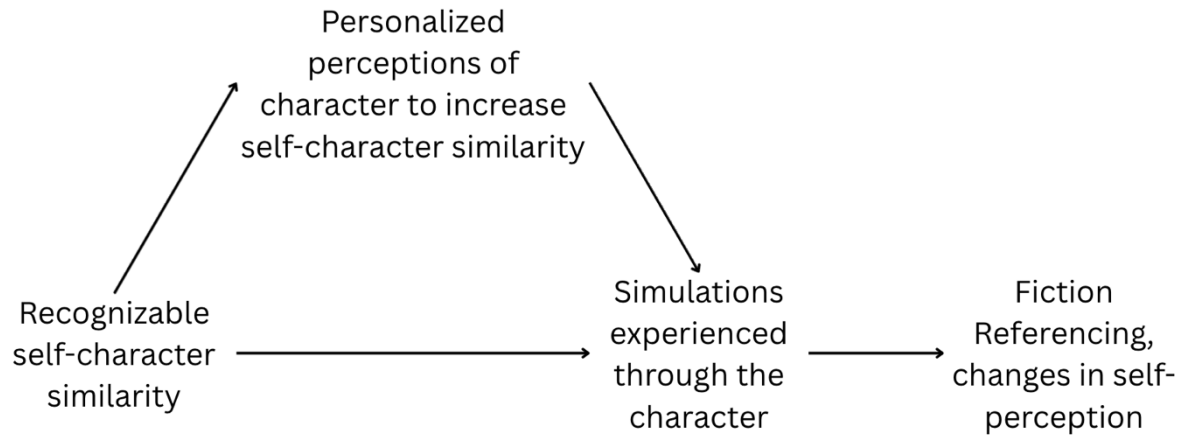
[26] Other results from this analysis: Social Template Referencing was significantly negatively correlated with number of headcanons ($r = -.17$, $p = .008$). Self-Story Referencing was not correlated with number of headcanons ($r = -.08$, $p = .183$)

(like headcanons) tend to make characters more self-similar and the theoretical framework that self-character similarity functions as an "on ramp" for the kinds of simulated experiences through fiction that lead to self-expansion (for which Narrative Referencing is at least theoretically a mechanism).

Rather, it seems plausible that some people process fiction deeply with a self-exploration orientation (conscious or implicit) that leads them to reshape elements of the story to be what they need them to be to serve their self-exploration more effectively when they reflect on it later. The people who do this might be more likely to reflect on fiction later because they shaped their perceptions of it to be more effective for this purpose, or they might shape their perceptions with the intention of returning self-reflectively to the story later. A visual model of this hypothesized process is presented in Figure 17. Investigating the causal relationships between these experiences and the shared characteristics of individuals who engage with fiction in this way will be an exciting direction for future research.

Figure 17

Hypothesized Theoretical Model Describing the Role of Strategic Character Perception Modifications in Fiction-Based Self-Exploration



Self-Construction and Identity Development

Fiction has at least two unique advantages in shaping the self: One is that it is more emotionally affective in such a way as to reduce the impulse to counter-argue than more grounded self-scaffolding tools like exposure to non-fiction (Moyer-Gusé et al., 2011; Moyer-Gusé & Nabi, 2010). The other is that it offers more expansive avenues for exploration than self-scaffolding tools that are more tethered to reality. A person who engages with fiction might consider more possible selves than a person who does not, and those possible selves might feel more real because of the immersiveness of fictional self-simulation. My work demonstrates that a substantial proportion of the population takes deliberate advantage of fiction to at least some extent when engaging in self-construction processes like self-exploration and identity definition.

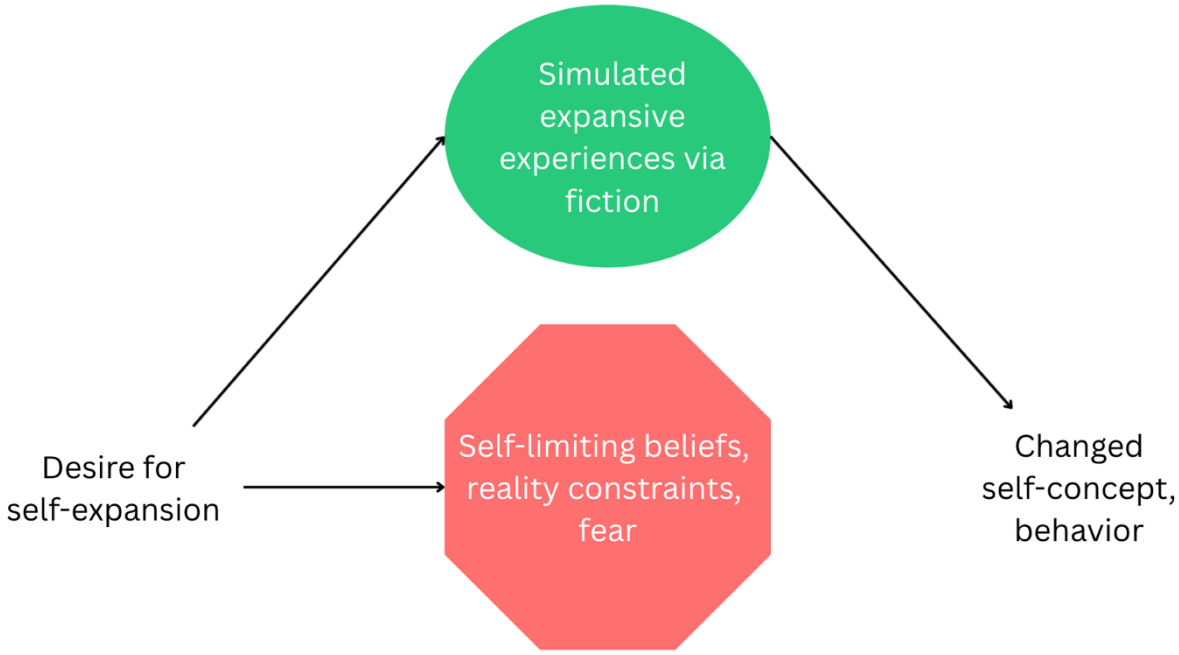
Further, use of fiction for self-construction seems to involve numerous abstract imaginative processes. Prior work has shown the importance of being able to ground oneself in fiction through direct self-character similarity; my work in some ways underscores this by showing that people will make personally meaningful characters more similar to themselves, while also demonstrating that self-character similarity is more active and dynamic than has previously been assumed. Further, while involvement with fiction might have an important emotional "going along with the narrative" component, this is by no means the full story, since some people actively and thoughtfully draw parallels between fiction and their real-life experiences to guide self-construction processes.

These findings together suggest that involvement with fiction is similar in many ways to the formulation of self-stories for self-construction, in that both are commonly, meaningfully, and (sometimes) deliberately used as a part of identity development. Specifically, I posit that people use self-stories to clarify identity based on real memories and real aspirations; self-stories

form a grounded core for narrative identity. However, reflecting on lived experiences and realistic aspirations can result in self-defeating beliefs about the limits of who one is or can be. Fiction can provide similar identity scaffolding assistance to reflections on the real self, but self-exploration through fiction is not bounded by the same constraints as self-exploration based in reality. If an individual who has at least some awareness of the kind of self-exploration they need, and the features of the self that are the most relevant to that self-exploration, then that individual can potentially find a good-enough fictional match to their own current reality and improve the fit by perceptually reshaping any elements that might not quite align with what they need. Once a reasonably good fit is tailored, the individual can comfortably cede control of the fantasy so that they are no longer constrained by the limits of their own imagination or self-perception: The story does the simulation for them. Anything meaningful learned from this simulation exercise can then be used to inform self-construction alongside reality-based identity-relevant information. I will give an example illustrating this theoretical process in the next subsection; a visual model of this hypothesized process is presented in Figure 18.

Figure 18

Hypothesized Theoretical Model Describing the Benefits of Simulated Fictional Experiences on Self-Expansive Exploration, Self-Perception, and Behavior



Diversity Science

The theoretical process I have outlined is one that might be useful to people with all kinds of experiences, but it might be particularly important to those whose identities are minoritized. People belonging to minoritized groups are not as well represented in cultural master narratives and might therefore struggle more than people belonging to majority groups to formulate personal narrative identities and engage in positive meaning-making. Further, minoritized people belonging to some groups and/or in some locations (e.g., Black individuals in majority-White areas; transgender people in most settings) might struggle to find others in their social networks who share their minoritized identity (or identities). Because of these potential deficits in both abstract cultural and specific social scaffolding for self-construction processes, it might be difficult to interpret one's past experiences (e.g., "are my experiences due to my individual

behavior or others' biases based on my identity?") and to imagine possible future selves (e.g., "the life paths that appeal to me do not tend to include people who share my identity, and the life paths of people who share my identity do not tend to be ones that appeal to me").

As such, drawing on reality might make narrative identity particularly difficult to develop for people with minoritized identities (e.g., Akers & Saucier, 2021; Gomillion & Giuliano, 2011; Leavitt et al., 2015; Quiros et al., 2020). Fiction might be particularly useful in such instances: While people with minoritized identities are also often underrepresented in fictional media, fictional characters can be perceived flexibly, making them potentially useful tools for self-exploration. For instance, an autistic teenager who does not know anyone else is who is autistic might struggle to view adults in her social environment as role models: She might perceive that their neurotypicality shaped their life course in ways that hers will not imitate due to her neurodivergence. Even if this hypothetical autistic teenager is unable to find any fictional media featuring an autistic character with whom she identifies meaningfully, she might be able to find a fictional character with whom she meaningfully identifies for other reasons (e.g., similar personality, hobbies, family relationships, etc.) and imagine that that character is autistic so that the character becomes a reasonably good fit for self-exploration.

It is also possible that characters with ambiguous identities might be helpful for exploration of the specific minoritized identity in question, when the identity is one that is discovered rather than always-known. For instance, a man questioning his sexual orientation might look to a fictional character who is personally meaningful to him as a tool for exploring sexual orientation in a self-distanced way by imaging that the character is gay. This kind of simulated self-exploration might be less threatening and more whole-person-oriented than more directly pondering, "Am I gay?"

However, it is also important to note that the work presented here does not indicate that fiction has the same relationship to all minoritized identities. Race in particular seems to be the subject of less perceptual flexibility than sexual orientation or neurotype (and perhaps gender, although it is difficult to say anything definitively about minoritized gender identities given the small trans* sample). While this might be due to the relative apparent racial homogeneity of the characters used in the study described in Chapter 2, the results indicating broad consensus on characters' racial identities were strong. Based on the evidence available, it is much more defensible to suppose that race (or, at least Whiteness[27]) is seen as a highly recognizable and perceptually inflexible characteristic.[28] If this is the case, the inclusion of nuanced and non-stereotypic racially diverse characters in fiction might be particularly important, since there do not appear to be perceptual differences that can partially or fully make up for a lack of overt representation.

Psychological Research Methods

The work presented here has two major implications for psychological research methods and the interpretation of results broadly. These implications are related to but distinct from the previously discussed implications.

First, psychological researchers should avoid making assumptions about how hypothetical people used as stimuli are interpreted by participants in studies. This is most notably true for studies about responses to fictional media, but it applies broadly too. Many

[27] As previously noted, while participants in the study in Chapter 2 generally agreed with one another about which characters were POC, they did not always agree on characters' specific racial identities. Investigating the patterns in this lack of consensus would help to clarify what is happening here more: Is the pattern similar to the pattern found in majority-minority perception differences (that is, participants of color perceive the characters of color they like more as having a similar racial identity to themselves)? Or different, such that differences in perceptions about the specific racial identities of characters of color is due more to uncertainty than to homophily?

[28] All fictional media used in this study were also visual, or had been adapted into a visual format. It is possible that there would be more flexibility in perceptions of characters who appear in exclusively text-based media.

psychological studies make use of imaginary scenarios presented to participants as vignettes. These vignettes are functionally fictional short stories.[29] Studies using such vignettes or explicitly fictional stories should consider if participants might be perceiving the personae in the vignettes/stories in meaningfully different ways from one another (or from how the researchers might assume the personae would be perceived), and whether differences in perceptions could influence results. For instance, a vignette-based study about social interaction styles that describes one person as fidgety and having a difficult-to-follow conversational style might be perceived by neurotypical participants as distracted or untrustworthy, whereas this hypothetical person might be perceived by neurodivergent participants as neurodivergent and therefore likely more sympathetic. Whether this possible underlying perceptual difference is meaningful to the conclusions of this hypothetical study should be considered by the hypothetical researchers conducting it.

Second, researchers interested in identity construction and narrative identity should consider using methods that ask participants directly about their relationship to fictional media. My work demonstrates that people meaningfully refer to fiction in processes related to identity construction and self-understanding. Many studies on these topics, however, do not mention fiction. While many such studies do include open-ended questions such that participants might describe experiences with fiction if they so choose, the wording of the questions does not necessarily invite such inclusions. A participant instructed to reflect on past experiences is likely to think primarily of past experiences from their real life, not fictionally simulated experiences. Even if the participant has a particularly meaningful connection to fiction, I would predict that

[29] This is true in some senses but perhaps not in others. Vignettes written for psychological studies are works of fiction, in that they do not describe literally real events. However, they might be interpreted by participants as being more real than stimuli presented as fictional. This idea warrants further study.

they would be most likely to mention fiction if they were to describe a real experience that occurred around a piece of fiction. While it might be tempting to assume that a lack of mention of fictionally simulated experiences indicates that these experiences are less meaningful than real experiences, at present, this is nonetheless an assumption rather than an evidence-backed truth.[30] My findings related to Narrative Referencing suggest that any given individual is roughly as likely to use fiction as a point of reference as to use self-stories; while this does not mean that fiction is used *as often* or *as meaningfully* as a point of reference, it does suggest that people are using fiction to understand their real lives enough to merit more attention in future research about self-construction and identity.

Conclusion

In this dissertation, I synthesized past research addressing relationships between the self and interactions with fictional media to provide evidence that fiction can play a meaningful role in self-construction. Two original projects advanced my claim: Project 1 shows that people consciously use fictional stories as points of reference when navigating real daily life and provides a novel tool to measure individual differences in this propensity, and Project 2 shows that people idiosyncratically perceive characters they like as being more similar to themselves than other people perceive those same characters. These projects indicate that people perceptually hone aspects of fiction into tools that will be more effective for self-construction and that they deliberately and actively use fiction as a tool for this purpose.

My findings contribute to media psychology by demonstrating that audiences engage actively and longitudinally with fictional media — changes to self-perception do not occur only

[30] Anecdotally, I find fictionally simulated experiences to be profoundly personally meaningful — often more so than my "real" experiences — but reading questions from narrative identity studies rarely if ever inspires me to report them. Perhaps I am just interpreting the questions wrongly, but if so, I doubt that I am the only one.

passively or during/immediately following immersion in a fictional story. This dissertation also highlights the importance of integrating the psychological study of fiction with narrative identity research and vice-versa, as experiences that take place in fiction and those that take place in reality appear to be in cognitive conversation with one another, perhaps especially among individuals with minoritized experiences.

APPENDIX A: NARRATIVE REFERENCING VALIDATION MEASURES

Retrospective Imaginative Involvement Scale (RII) (short version)

Citation:
Slater, M. D., Ewoldsen, D. R., & Woods, K. W. (2018). Extending conceptualization and measurement of narrative engagement after-the-fact: Parasocial relationship and retrospective imaginative involvement. *Media Psychology*, *21*(3), 329-351.

Instructions:
Retrospective imaginative involvement:

How frequently have you done the following AFTER watching a story TV show or movie (0 = never, 10 = very often)? Story television shows are defined as fictional narratives (i.e., not reality, news, chat and other television content).

Boundary expansion:

How often when you watch a TV story or movie…

Response scale:
Parasocial relationships with characters: 1 = very strongly disagree, 9 = very strongly agree
Retrospective imaginative involvement: uses a slider, 0 = never, 10 = very often
Boundary expansion: 1 = never, 8 = always

Items:
Parasocial relationships with characters (PSR-C):

1. I like to imagine my favorite TV show or movie characters as people I know personally.
2. I often feel like characters from my favorite TV shows or movies are people I know and care about.
3. I like to talk to others about what my favorite TV show or movie characters are like as people.

Parasocial relationships with performers (PSR-P):

1. I like to imagine my favorite actors or actresses as people I know personally.
2. I sometimes imagine my favorite actors or actresses as my friends or romantic partners in the setting of the TV show or movie
3. I like to talk to others about what my favorite actors or actresses are like as people.

Retrospective imaginative involvement (RII):

1. Imagined you were one of the characters in the story, but having different interactions or having different experiences than actually happened in the story you saw.
2. Imagined that you were one of the characters from the story as you went about some activity from your own life
3. Imagined a character from one show that you watch in a different setting than that TV show or movie (e.g., such as in another TV show or movie or in actual life)?
4. Imagined having conversations or other interactions with the characters in a show or movie?

Boundary expansion (BE):

1. Do you experience facing situations and challenges other than those in your own life

2. Do you experience what it would be like to have skills and abilities that are different from your own?
3. Do you experience what it might be like to relate others in ways different that you normally do yourself?
4. Do you experience getting to know people you would never otherwise know?

Narrative Identity Self-Evaluation Questionnaire (NISE)

Citation:
Lind, M., R. Cowan, H., Adler, J. M., & McAdams, D. P. (2025). Development and Validation of the Narrative Identity Self-Evaluation Scale (NISE). *Journal of Personality Assessment*, *107*(3), 292-305.

Instructions:
Some people think about who they are and how they have developed over time in the form of personal stories. These stories may encompass the overall life story or shorter stories from one's life. You may feel like this is true to how you see yourself, or not really. Please reflect on how you think about yourself as a person when answering the following questions. There are no right or wrong answers. If it helps, take a moment now to think about how you engage with stories from your life (if at all), and then answer the following questions.

Response scale:
1. Strongly disagree
2. Disagree
3. Somewhat disagree
4. Neutral
5. Somewhat agree
6. Agree
7. Strongly agree

Items:
1. Thinking about my life story helps me know who I am as a person.
2. I am curious to understand how events in my life story have changed me as a person.
3. I think a lot about connections between different experiences I have had (e.g., how one experience caused a later experience).
4. I have learned lessons and gained insights from thinking about my life as a story.
5. As time passes, I notice that I increasingly learn and grow from my experiences.
6. I want to get the facts right when I think about stories from my life.
7. In my personal stories, I think it’s important to know where and when things have happened.
8. Stories from my life usually have a clear beginning, middle, and end.
9. It matters to me to have a coherent life story.
10. I want to get the timeline of my life story correct, as much as possible.
11. Looking back on my life story, I recognize a sense of belongingness with other people.
12. Most bad things that have happened in my life story have eventually resolved in a positive way.
13. Overall, I would consider my life story to be more positive than negative.
14. The story of my life is a highly optimistic one.
15. In my life story, my own personal decisions have largely been the driving force, rather than external circumstances.
16. When I think about my life story, I end up feeling confused about who I am as a person.
17. I have had no control over what has happened in the story of my life.

18. In my life story, I see a protagonist unable to love and be loved by others.
19. In my life story, I notice a pattern of how good events, even the most promising ones, eventually turned bad.
20. My life story feels like a puzzle and the pieces don't fit together.

Scoring:
Autobiographical reasoning: 1-5
Narrative structure: 6-10
Positive themes: 11-15
Narrative identity disturbance: 16-20
No items are reverse-scored.

Iowa-Netherlands Comparison Orientation Measure (INCOM)

Citation
Gibbons, F. X., & Buunk, B. P. (1999). Individual differences in social comparison: Development of a scale of social comparison orientation. *Journal of Personality and Social Psychology, 76*(1), 129–142. https://doi-org.uoregon.idm.oclc.org/10.1037/0022-3514.76.1.129

Instructions:
Most people compare themselves from time to time with others. For example, they may compare the way they feel, their opinions, their abilities, and/or their situation with those of other people. There is nothing particularly 'good' or 'bad' about this type of comparison, and some people do it more than others. We would like to find out how often you compare yourself with other people. To do that, we would like to ask you to indicate how much your agree with each statement below.

Response Scale:
1-5, 1 = I disagree strongly, 5 = I agree strongly

Items:
1. I often compare how my loved ones (boy or girlfriend, family members, etc.) are doing with how others are doing
2. I always pay a lot of attention to how I do things compared with how others do things
3. If I want to find out how well I have done something, I compare what I have done with how others have done
4. I often compared how I am doing socially (e.g., social skills, popularity) with other people
5. *(Reversed)* I am not the type of person who compares often with others
6. I often compare myself with others with respect to what I have accomplished in life
7. I often like to talk with others about mutual opinions and experiences
8. I often try to find out what others think who face similar problems as I face
9. I always like to know what others in a similar situation would do
10. If I want to learn more about something, I try to find out what others think about it
11. *(Reversed)* I *never* consider my situation in life relative to that of other people

Scoring:
Ability: Items 1-6
Opinions: Items 7-11
Items 5 and 11 are reversed, as noted

Marlowe-Crowne Social Desirability Scale Short Form C (M-C Form C)

Citation
Reynolds, W. M. (1982). Development of reliable and valid short forms of the Marlowe-Crowne Social Desirability Scale. *Journal of Clinical Psychology*, *38*(1), 119-125.

Instructions:
Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you.

Response Scale:
True, False

Items:
1. It is sometimes hard for me to go on with my work if I am not encouraged
2. I sometimes feel resentful when I don't get my way
3. On a few occasions, I have given up doing something because I thought too little of my ability
4. There have been times when I felt like rebelling against people in authority even though I knew they were right
5. No matter who I'm talking to, I'm always a good listener
6. There have been occasions when I took advantage of someone
7. I'm always willing to admit it when I make a mistake
8. I sometimes try to get even rather than forgive and forget
9. I am always courteous, even to people who are disagreeable
10. I have never been irked when someone expressed ideas very different from my own
11. There have been times when I was quite jealous of the good fortune of others
12. I am sometimes irritated by people who ask favors of me
13. I have never deliberately said something that hurt someone's feelings

The Very Efficient Assessment of Need for Cognition Scale (NCS-6)

Citation
Lins de Holanda Coelho, G., Hanel, P. H. P., & Wolf, L. J. (2020). The very efficient assessment of need for cognition: Developing a six-item version. *Assessment*, *27*(8), 1870-1885.

Instructions:

Response Scale:
1-5, 1 = Extremely uncharacteristic of me, 5 = Extremely characteristic of me

Items:
1. I would prefer complex to simple problems
2. I like to have the responsibility of handling a situation that requires a lot of thinking
3. *(Reversed)* Thinking is not my idea of fun
4. *(Reversed)* I would rather do something that requires little thought than something that is sure to challenge my thinking abilities
5. I really enjoy a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought

Scoring
Items 3 and 4 are reverse scored, as noted

APPENDIX B: NARRATIVE REFERENCING CFA COVARIANCE MATRIX

	Factor 1	**Factor 2**	**Factor 3**
F1: Fiction Referencing	**1.58**		
F2: Self-Story Referencing	0.57	**0.97**	
F3: Social Template Referencing	0.77	0.51	**0.83**

Note. Parameters were estimated using Maximum Likelihood (ML) estimation within the lavaan package in R. Factors are not standardized (i.e., latent variable variances were *not* fixed to 1; this differs from earlier reporting of factor loadings). Bolded values on the diagonal are the variances (s^2); off-diagonal values are the covariances (*cov*).

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