Adult Attachment and Parasocial Relationships:

The Influence of Relational Investment and Hedonic Enjoyment

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Abstract

Previous research has examined parasocial relationships under the scope of adult attachment theory. It has been shown that while attachment theory was originally designed in the context of human interpersonal relationships, it is also applicable to the relationships people develop with fictional characters. This study consisted of three main aims. The first was to replicate previous findings of the dynamic between attachment and several facets of parasocial engagement. Secondly, this research aimed to expand upon parasocial theory by examining how investment into a relationship may affect the dynamic between attachment and parasocial engagement. Finally, this study investigated hedonic enjoyment as a potential moderator between attachment and parasocial engagement. 218 participants completed an online questionnaire, which consisted of psychological instruments that aimed to measure attachment style, personality traits, trait transportability, parasocial relationship, parasocial interaction, character identification, relational investment, and hedonic enjoyment. Participants were also asked to choose and name one favourite and one neutral character, as well as report on demographic variables. The results of this study suggests that anxiously attached individuals were more likely to form stronger parasocial bonds and become immersed into narratives. Avoidantly attached individuals were less likely to form parasocial bonds, and would mainly become immersed in narratives when they were also highly anxious. Relational investment did not moderate the association between attachment and parasocial relationship as was originally predicted. Hedonic enjoyment also did not show evidence of a moderation effect between attachment and parasocial relationship, contrary to initial predictions. The findings from this study align with a complementary framework of parasocial engagement, where people would form bonds with fictional characters in a similar manner to real-life relationships. This largely concurs with prior research. The novel elements of this study did not yield significant results in line with the predictions but provided avenues for future parasocial research.

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Attestation of Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

Signed: ……..

Date: 17 July 2023

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Ethics Approval

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Introduction

What motivates us to engage in fictional narratives? Are humans predisposed to be story tellers and consumers? It is one of the oldest, most universal forms of knowledge and information transfer. Stories have the ability to educate, they are more easily recalled from memory than facts or figures, and often have entertainment value. Besides knowledge transfer, narratives can also facilitate a form of social connection. If humans are social creatures, then perhaps the desire for that relational connection is what draws us toward fictional narratives.

Media Consumption: The Current State

The development of technology has today given us unprecedented access to various forms of narratives, particularly through digital media. A survey of 1005 consumers in the US found that 78% of households subscribed to at least one online streaming platform (Durrani, 2023). Netflix, presently the most popular narrative streaming site, had 231 million American subscribers as of 2022. In New Zealand, just over 2.8 million people stream television or movies online, with Netflix accounting for approximately 2.1 million consumers (Roy Morgan, 2021). We are also no longer limited to traditional forms of storytelling like film and books. Narratives have been adapted for even more immersive platforms like video games, social media streaming, and virtual reality. It stands to reason that an activity so widespread would have psychological effects that warrant exploration.

The Covid-19 pandemic deprived many people of social and physical connections they would regularly engage in. Through the pandemic, research postulated that people compensated for the lack of social connection through fictional narratives (Bond, 2021). While connecting to our friends and family through digital platforms like video-calling was an option, the consumption of fictional narratives

and stories through online streaming was also said to improve self-esteem and combat loneliness (Jarzyna, 2021; Derrick et al., 2009).

Parasocial Engagement

These social connections that are made with characters through a screen or book are called parasocial relationships. Parasocial relationships are defined by Horton and Wohl (1956) as unilateral relationships where only one member is aware of and reacting to another. If we think of a television character as an example, an audience member can react to the behaviour of the character, while the character is not acutely conscious and does not react to specific members in the audience, even if they know an audience exists. There are several aspects of parasocial engagement that have been explored within the literature.

In this thesis, we examine four aspects. These are parasocial interactions, relationships, identification, and transportation. The first of the four facets is *parasocial interaction,* which explores effects that occur during exposure to a media figure, perhaps while watching them on television or reading about them in a book (Hartmann & Goldhoorn, 2011). The second facet is *parasocial relationships*, referring to the effects of a media figure that remain after an interaction (Rosaen & Dibble, 2016). *Character identification* is the third facet, and it is defined as how much we relate to a media figure (Tukachinsky et al., 2020). The fourth facet is *narrative transportation*, which encapsulates the idea of being drawn into a fictional world without an affinity for any specific character (Green & Brock, 2000). These facets often have some overlap, and their boundaries require further investigation.

Parasocial engagement can be a useful proxy for examining real-life relationships. Studies have used narrative and simulated environments to better understand how people react and feel in certain situations (Schönbrodt & Asendorpf, 2012). Virtual relationships acting as a proxy could potentially allow researchers to study people who may struggle with developing and sustaining real-world relationships.

These relationships are often challenging to investigate in purely a real-world context but can be somewhat calibrated through utilizing simulated environments like those in books or television shows.

Parasocial Engagement: Functions of Attachment and Investment

Adult attachment theory, which attempts to explain people's behaviour within relational dynamics (Hazan & Shaver, 1987), is an interpersonal theory that has been explored in connection to virtual relationships (e.g., Cole & Leets, 1999; Rain et al., 2017; Silver & Slater, 2019). Attachment style is measured across two spectrums, which are avoidance and anxiety. Attachment avoidance is characterized by disinclination towards dependence within relationships, and a general aversion against commitment (Bergeron, 2020). Attachment anxiety describes people who are often over-dependent in their relationships, and consistently seek out reaffirmation or attention (Shaver & Mikulincer, 2007). Studies have shown that attachment theory can be applied to virtual relationships as well (Cohen, 2004; Cole & Leets, 1999). Considering attachment is an interpersonal theory, the advantage of examining it within the lens of parasocial theory is that it allows researchers to gauge participants' reactions to the social aspect of media characters, which has less complication than interactions with other humans (Rain et al., 2017).

Another interpersonal theory that has been investigated within parasocial research is the investment model (Rusbult, 1980a). The investment model aims to characterize the level of commitment and dependence a person feels towards a specific relationship. While the investment model has been briefly explored within parasocial theory (Eyal & Dailey, 2012; Ramasubramaniam & Kornfield, 2012), research comparing the two concepts is still in its infancy. As this thesis investigates parasocial relationships as a function of attachment style, we theorize that levels of investment would be an important factor to consider in this dynamic.

This Study

This thesis aims to replicate the findings of the four parasocial facets in relation to attachment style from previous studies (e.g., Rain & Mar, 2021, Rain et al., 2017). We also seek to expand upon parasocial theory by including a subset of the investment model measure, that is relational investment, to examine if investment toward a parasocial relationship differs according to attachment style. Finally, we incorporate a measure of enjoyment. This is to examine whether parasocial bonds are formed merely due to the mental rewards gained from consuming a story, or if it is the relationship with the character that drives parasocial engagement. We postulate seven research questions, each examining how attachment is associated with a facet of parasocial engagement, and whether relational investment or hedonic enjoyment might play a part in moderating these associations.

With access to narratives through technology today, understanding the intricacies behind how we react and feel within an engagement with a fictional character is essential. Findings around how attachment styles might shape our behaviour or coping mechanisms need not only apply to those who are highly anxious or avoidant. Studies have shown that developments within the parasocial literature can be relevant to the apprehension of social relationships overall (Buote et al., 2009; Eyal & Cohen, 2006). As we become more immersed into narratives, it is imperative we examine what aspects of parasocial engagements are adaptive and what aspects are harmful.

Literature Review

Parasocial Engagement: Origins

Horton and Wohl (1956) introduced the term parasocial relationships to describe one-sided relationships where one party is aware of the other but not vice versa. These relationships generally

take place in the form of an individual in the role of an "audience" member observing a media persona like a celebrity or a fictitious character. The act of a media character communicating towards a general audience they have no direct link with can make the audience feel as though the character is aware of them, helping facilitate the sensations of social interaction. Dubbed an illusory experience of the viewer (Hartmann & Goldhoorn, 2011), the key feature is that the interaction is not bidirectional. In other words, the media character cannot (usually) respond to the communications of the individual in the manner of real-life social interactions. There are several variations and extensions of parasocial relationships (e.g., parasocial interaction, parasocial breakup, parasocial romance). Early research did not often differentiate between the conceptual definitions of these variations. In this thesis, the dynamic of response and effect of a media character toward a viewer is termed parasocial engagement, to encompass the variety of variations within the research area.

While originally developed as a theory for psychological inquiry, it acquired little attention from psychology research literature in its early years, instead garnering more focus from media and communication studies (Giles, 2002; Liebers & Schramm, 2019). McQuail et al. (1972) found that early soap opera characters struck viewers as people they knew in real life and used these characters to better understand their own lives. These findings were similar to the dynamics first described by Horton and Wohl (1956). Levy (1979) conducted research exploring adults' consumption of television news and created a psychometric scale to measure parasocial engagement. It was only when Rubin et al. (1985) studied the concept's merits within uses-and-gratifications research, that it began to snowball. The Parasocial-Interaction-Scale was developed partly based on Levy's work and is now the most widely used scale measuring parasocial relationships (Liebers & Schramm, 2019). Parasocial relationships have been studied and validated in an array of contexts. For example, examining how people perceive engagement with their favourite celebrities (Scherer et al., 2022) or television personalities (Eyal & Rubin, 2003). Parasocial relationships have also been compared across cultures. Dinkha et al. (2015)

conducted a study that investigated the nature of parasocial relationships in a Kuwaiti population and compared it to previous studies conducted in North America (e.g., Cohen, 2004; Cole & Leets, 1999). Parasocial relationships have also been explored on various media platforms such as social media (Jin et al., 2021) and videogame streaming (Wulf et al., 2021). Since its introduction in 1956, research on parasocial relationships has seen over 250 empirical studies, each refining and developing the boundaries and tangibility of the concept (Liebers & Schramm, 2019).

The parasocial concept has its share of criticism. One of the main drawbacks of parasocial theories, which was exemplified by the broadly utilised Parasocial-Interaction-Scale, was the lack of definition in its boundaries. In Horton and Wohl (1956), their initial conceptualization of parasocial interaction is defined as a symbolic social interaction between a media figure and an audience within the boundaries of immediate exposure, one that occurs only during the viewing experience. The approach taken by Rubin et al. (1985) in developing the parasocial concept stems from uses-and-gratifications research, in which parasocial interaction was viewed to be motivated by rewards or social gratification that users received from engaging in narratives (Rosaen & Dibble, 2016). Rubin et al. (1985) theoretically considered parasocial interaction to include both immediate interaction and long-term identification with a media figure. This definition suggests parasocial interactions to be on a spectrum of interpersonal involvement with a character and accounted for within, pre-exposure, as well as post-exposure effects (Klimmt et al., 2006). While this led to early studies failing to adequately account for the nuances in the boundaries of parasocial engagement, researchers today have better encapsulated some of the various aspects of media experiences. Two example derivations are within-exposure effects, now labelled as parasocial interaction, and ongoing, relational effects, which are described to be a parasocial relationship (see Dibble et al., 2016; Hartmann & Goldhoorn, 2011).

Relationships, Interactions, and Other Parasocial Experiences

In this section, we will explore each of the four facets listed above in more depth. Within this thesis, the four main facets are: parasocial interaction, parasocial relationship, character identification, and narrative transportation. Each of these facets describes slightly varying aspects of engagement with media characters, which include feelings or emotions for a character, aspirations toward a character, or being carried away by the story or fictional world.

Parasocial Interaction

Parasocial interaction is defined as the illusory perception of "mutual awareness" (Hartmann & Goldhoorn, 2011) of a media figure by an audience member during a viewing experience. Parasocial interaction is concerned with the "interactional" experience when a viewer might engage in acts like reacting to the media figure on screen (Dibble & Rosaen, 2011) or feel as if a fictional character is aware of and responding directly to the viewer's presence (Hartmann & Goldhoorn, 2011; Rosaen & Dibble, 2016). While this dynamic is classified as unidirectional, the way parasocial interaction affects an audience member might nonetheless be comparable to dyadic interactions. This definition also aligns more closely with the original formulation by Horton and Wohl (1956). Hartmann and Goldhoorn (2011) developed and validated a scale aimed to examine effects perceived by a viewer during exposure to a media character. Analysis of this scale during their study suggested that it was conceptually distinct from parasocial relationships, which focuses on effects outside of exposure (Dibble et al., 2016).

Parasocial Relationship

Parasocial relationships are characterised as unidirectional relationships between a viewer and media figure that include effects beyond just during viewing the character (Rosaen & Dibble, 2016). In other words, parasocial relationships are a bond with a media figure that develops over time and persists even when not directly interacting with the media figure. Dibble et al. (2016) sought to clarify some of the boundaries and different constructs that parasocial research has studied over the years. The main issue was cited to be terms like parasocial interaction and relationship being used interchangeably, without discretion to the differences between during-viewing and outside-of-viewing effects (see Dibble et al., 2016; Klimmt et al., 2006). Their study established that the Parasocial-Interaction-Scale (Rubin et al., 1985), which tangibly exemplified the issue by being used in various parasocial contexts (e.g., Cohen, 2004; Cole & Leets, 1999; Dinkha et al., 2015), was more a measure of a parasocial relationship than its namesake of parasocial interaction. Tukachinsky et al. (2020) reviewed parasocial research studies that sought to develop more valid and refined measures of parasocial relationships by shortening or rewording the original Parasocial-Interaction-Scale. In line with Dibble et al. (2016), their findings suggest that the original scale validly measured parasocial relationships. The Parasocial-Interaction-Scale consisted of items that reflected long-term constructs (e.g., “I think my favourite character is like an old friend”), which on its face aligns with the described characteristics of a long-term nature, perhaps somewhat similar to real-life relationships (Rain & Mar, 2021).

The empirical distinction between within-viewing effects and overall, long-term effects was influential in the study of parasocial engagement (Tukachinsky et al., 2020). In a review of 261 empirical studies within the parasocial literature, it was found that just over half of the studies explored parasocial relationships, about a third examined parasocial interaction, and over a tenth included more than one parasocial construct (Liebers & Schramm, 2019). Two-thirds of the studies within this review were published within the last two decades (2007 and onward). This aligns with the timeline where additional

attention was given to the examinations of parasocial engagement. As these two paradigms originate from similar roots, it stands to reason that the correlation between parasocial interactions and parasocial relationships should be scrutinized.

Several studies have posited that as parasocial relationships can be based on long-term, repeated exposure to a media figure, the value of parasocial interaction with the media figure during each exposure would directly relate to the strength of parasocial relationship subsequently developed (Klimmt et al., 2006; Tukachinsky & Stever, 2019). Alternatively, Tukachinsky and Sangalang (2016) suggested instead that parasocial relationships and parasocial interaction are orthogonal constructs. They describe that people might have strong interactions with individuals who they do not necessarily have a significant relationship with. People could also have strong relationships with individuals they do not interact with often or at all. If we were to use a real-life example as a metaphor, perhaps we can think of the blossoming romance of a young couple that turns into long-standing affection. In the initial stages (say a first date), each interaction with the person might be riveting, yet outside of the specific interactions, maybe they do not quite have a significant hold on thoughts and emotions yet. This could be reflective of high parasocial interaction scores, but lower parasocial relationship scores. If this relationship then progresses into a lifetime partnership, perhaps then they each occupy emotional spaces that provide the other with warmth and affection, even when they are not directly interacting with each other. We might also see that each specific interaction may not necessarily stand out as much as before. This could be akin to having high parasocial relationship scores, but lower parasocial interaction. It stands to reason then that perhaps media users too, in their bonds with fictional characters, can experience high levels of one construct without significant effects of another. While parasocial relationships and parasocial interaction seem intertwined, the two are conceptually distinct and the exact empirical link requires further exploration.

Character Identification

Another aspect of parasocial engagement that is closely connected to parasocial relationship and interaction is character identification. Identification occurs when an audience member adopts the point of view of a character (Cohen, 2001). While the former two concepts assume the viewer retains their own point of view during the viewing experience, character identification sees the viewer merge their self-image with that of the media figure (Tukachinsky et al., 2020). In other words, the viewer vicariously takes the place of the media character, assumes their identity, and reacts to events happening in the narrative as though they were happening to the viewer themselves (Horton & Wohl, 1956; Sestir & Green, 2010).

Research suggests that these concepts can be correlated (Tukachinsky, 2014). While correlated, there are distinctions in the boundaries of these concepts. Where identification is defined by empathetic feelings and responses by an audience during a viewing of media, parasocial relationships encapsulate the perception of a relationship with a character beyond just the viewing session. And as identification measuring instruments are usually retrospective surveys (similar to parasocial relationship measurements), it is therefore conceivable that an audience member could experience high levels of both identification with a character (during a viewing) and a parasocial relationship with a character over time (Tukachinsky et al., 2020).

Identification and parasocial interaction are conceptually linked, but distinct from each other (Cohen, 2001; Tukachinsky et al., 2020). While parasocial interactions are relationally-focused, character identification is aspirational. Even though these two constructs are linked, there are important elements that affect the dynamic in unique ways. Eyal and Rubin (2003) found evidence suggesting that a viewer's predispositions positively relate to the level of identification with a similar character, but not perceived parasocial interaction. Cohen (2001) suggests that this distinction is the result of a viewer, who is

positioned as an external entity, interacting with a media character. This differs compared to when the viewer is positioned inside a narrative as the character themselves through identification. Chory-Assad and Yanen (2005) corroborated the difference in affects with findings that suggest identification and parasocial interaction are associated with each other but remain conceptually distinct.

Another angle to consider these differences lies in the types of viewer motivation to engage in narratives. Identification with a character could stem from the desire to let go of one's "self" and blur the lines between a viewer's identity with that of a fictional character in escaping reality (Green et al., 2005). In comparison, parasocial interaction is driven by the engagement a viewer experiences from a particular character. Cohen et al. (2019) showed that a character "breaking the fourth wall", where they speak toward the camera in a manner of speaking to the audience, does not significantly affect identification yet enhances parasocial interaction. Sestir and Green (2010) provide an example of successful manipulation of identification. In their study, they provided participants with specific thought-based instructions before showing them a short movie clip. In the high identification condition, participants were asked to observe the narrative "as if you were the main character in the clip", whereas the instructions for the low identification condition were to remain "as if you were an independent observer of the clip." The results demonstrated that participants in the high identification group experienced a shift in "self-concept" toward the media character, whereas those in the low identification group did not. While identification and parasocial experience (both relationship and interaction) are often correlated, the different points of view assumed by an audience and empirical evidence warrant that identification is examined as a separate construct.

Narrative Transportation

The concepts mentioned thus far capture the experiences between a viewer and specific characters. What if someone's gravitation toward a narrative was not based on an individual figure per

se, but the world the characters live in? Numerous movie franchises have successfully built elaborate realities within their narratives (*e.g., Star Wars, Harry Potter, Lord of the Rings*). It stands to reason that an audience drawn to such narratives might enjoy the idea of being teleported into the fictional realities themselves. Transportation into a narrative reality is a concept that examines this idea. Developed by Green and Brock (2000), it is defined as a mental process where an individual becomes immersed in a narrative world in a way that elicits cognitive and emotional responses (Green, 2002). The term transportation was based on an analogy to travel by Gerrig (1993) which described how a person might be transported by some means, disengage from certain aspects of the real world, and then return from the experience changed in some way. An example feature of the transportation experience is losing a sense of space and time in a viewer's physical world.

While transportation has been shown to associate with identification (e.g., Tukachinsky, 2014), a conceptual distinction of transportation is a viewer's ability to experience the narrative as their own selves when transported into a story, as opposed to assuming the identity and perspectives of a character through identification (Sestir & Green, 2010; Tukachinsky et al., 2020). Green et al. (2004) posit that transportation may be a prerequisite for identification, arguing that a viewer adopting a character's thoughts and frame of mind necessitates the viewer letting go of aspects of their physical reality. While transportation is often explored in the context of persuasion, studies have shown strong positive links between transportation and parasocial relationships (Greenwood, 2008; Greenwood & Long, 2009), and has been used in studies specifically to examine viewer involvement with narratives in relation to enjoyment (Green et al., 2004) and adult attachment (Rain et al., 2017; Silver & Slater, 2019). This section of literature corroborates the need for further examination of transportation, and the inclusion of it in our study.

Does Virtual Mean Not Real?

While often developed between fictional characters or television celebrities, types of parasocial experiences today can range from more traditional storybook characters to the contemporary reality of social media influencers. The rapid growth of technology has markedly blurred the lines between the capabilities of reciprocity between audience and character. Some examples on different ends of the spectrum can be seen with traditional television or book characters having almost no input, and social media celebrities more heavily interacting with their audiences through comments, messages, and live streams (Hartmann & Goldhoorn, 2011; Klimmt et al., 2006; Liebers & Schramm, 2017). Another example, perhaps tangential, is the growth of virtual reality. Kane et al. (2012) explored the effects of the perceived attentiveness of a partner on the stress levels of an individual completing a task in a virtual environment. In this study, participants were asked to interact with a digitised version of their partner in a virtual reality environment designed to elicit stress, finding that these computerized actions from digitised romantic partners yielded lower stress levels. As often seen in the videogame industry, "avatars" can interact with each other in virtual environments while exhibiting their real-life predispositions, which include attachment style (Schönbrodt & Asendorpf, 2012) and prosocial tendencies (Gillath et al., 2008). Where would this interaction sit on the spectrum of "real" versus "fictional"?

Giles (2002) posits that perhaps our previous understanding of the disparity between social and virtual interactions may need to be overhauled, citing two examples of real-life interactions that seem to possess parasocial traits. One of these examples is a performer at a show with a large audience, where the inherent power dynamics make it a unidirectional relationship between the performer and any individual audience member. Another example is a young person developing a romantic crush on a classmate they have never interacted with. Both these situations show a level of interaction that lies somewhere in between the parasocial world of television or books, and a more traditional, bidirectional

interaction. When these examples are compared to having a parasocial relationship with say a “social media celebrity”, one could argue that the spectrum of engagement may not necessarily be neatly divided with media-based characters on one side and real-life characters on the other.

Arguably, a central tenet of the benefits of parasocial research is the ability to compare its effects to real-life social relationships and interactions. Giles (2002) suggests that once an individual makes a judgement or attributes personal characteristics to a media character, the individual will then incorporate the character into their social network and respond as if they exist on the same physical plane. The media equation is an example theory that provides support for this notion, suggesting that human perception often does not differentiate between social stimuli from the real world and those that come from media, which helps explain the strong feelings that an audience might develop for media figure (Reeves & Nass, 1996). Mar and Oatley (2008) suggest that fiction, particularly narratives about people and interpersonal relationships, serves the purpose of providing a framework to better understand complicated systems.

Human interpersonal relationships are the quintessential example of a complicated system. This is magnified even more so for those that face additional challenges in experiencing the nuance of social relations. In reference to these challenges, carefully crafted fiction might be able to cater to dyssemic individuals by creating a safe, readily available simulation that aids in creating mental schemas for new social situations in the real world. One example of an internal barrier that is mitigated through storytelling is when an individual with autism spectrum disorder (ASD) sees a representation of a similar character in *The Good Doctor* television show. The show depicts Dr Shaun Murphy, who has ASD, navigating relational, professional, and emotional waters. Such depictions allow viewers with similar challenges to mentally simulate their own thoughts, reflections, and focuses from the comfort of a parasocial experience. Another example is of an environmental barrier that swept the world in 2020, the Covid-19 pandemic. Through the pandemic, research suggests that people showed increased parasocial

closeness to celebrities and fictitious figures, especially those utilizing parasocial relations as compensation for reduced social contact (Bond, 2021). Others in support posited that parasocial engagement during a time of isolation or quarantining allowed people to retain a sense of togetherness, fulfil belongingness, and raise self-esteem (Jarzyna, 2021). Narrative simulation has also been described to play an important role in the communication of social knowledge (Mar & Oatley, 2008; Slater et al., 2014). Through consuming works of fiction, we can experience a richer vein of interpersonal dynamics like stories of other cultures (Schmid & Klimmt, 2011) or other periods of time (e.g., Hall, 2019) that would not be easy for one to be exposed to otherwise.

Parasocial Research as a Proxy for Adult Attachment

When talking about theories of interpersonal relations, one theory stands out in its association with parasocial research; adult attachment theory. Parasocial research is a useful proxy in examining differences between real and virtual relationships (Schönbrodt & Asendorpf, 2012). Adult attachment theory is an example measure that relationship satisfaction and longevity can be based on. Vicary and Fraley (2007) conducted a study where they had participants partake in a virtual simulation task, where participants would read through a story involving a relationship in which the participants were positioned as protagonists. Participants were to be given the opportunity to make a choice between relationally-beneficial acts and relationally-detrimental acts as they progressed through the narrative, and were informed to select the choices they would most likely select within their own real-life relationships. They found that attachment styles predicted the choices participants made, where insecure attachment was associated with making poorer relational choices at the start and over the course of the simulated relationship. Additionally, participants' satisfaction with the relationship was related to the choices they made, even when those choices were arbitrary and had no effect on the

virtual partner's behaviour in the simulation. These results imply that people's tendencies within real-life relationships can be transferred to virtual platforms.

Another interesting study design was Rosaen and Dibble's (2016) inclusion of a disliked character in their examination of attachment's relation to parasocial experiences. They explored differences in the strength of relationships between liked and disliked characters. The reasoning behind this decision was insecurely attached individuals have been cited to develop real-life relationships with negative traits, and that perhaps this might be reflected in their parasocial tendencies as well. An interesting result of their examination of disliked characters was that while parasocial relationships were generally stronger amongst liked characters, both avoidantly and anxiously attached participants seemed to gravitate toward developing parasocial relationships with disliked characters specifically when they were also lonely and socially anxious. It is plausible that insecurely attached individuals are then drawn towards any form of social bond when faced with negative emotions like feeling lonely. And as media figures are generally more available and accessible than human relations, perhaps this dynamic becomes more salient during such times of loneliness, or when social bonds in real life are challenging to maintain, as is often the case for insecure attachments.

Adult Attachment Theory

Adult attachment theory is a construct describing habits and tendencies in adult relationships (Hazan & Shaver, 1987). Attachment theory was originally used to characterize the relationship between an infant and its caregiver, where the infant's comfort and willingness to explore a new environment depended on its caregiver's ability to provide a stable sense of security (Stever, 2017). The "strange situation procedure" was an early method of empirically assessing attachment (Ainsworth et al., 1978; Ainsworth, 1989). In this procedure, an infant and its caregiver are put in a room with toys together with

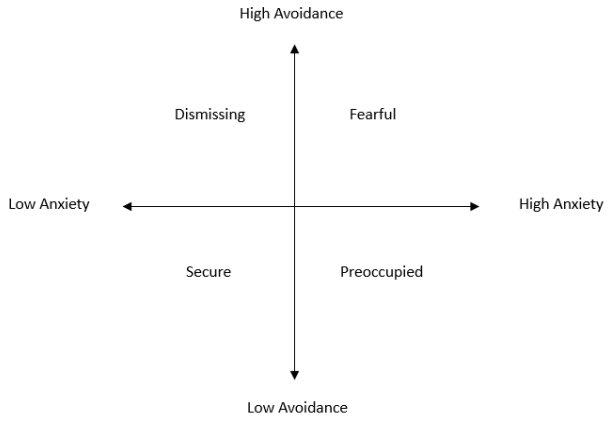
a research assistant before the caregiver is asked to leave the room for a short period, causing the infant some distress. Attachment style is measured by how much an infant's stress is diffused upon the caregiver's return. According to Bowlby (1973), an infant creates mental renditions of their caregiver's dependability based on past interactions, which manifests in the infant's ability to be soothed. When an infant believes that their caregiver is readily available to them in times of distress, the infant is easily soothed and is said to be more securely attached. If the infant is not confident in their caregiver's ability to comfort them in times of need, then they are described to be insecurely attached. These mental renditions then transfer into the infant's confidence in playing and exploring novel environments around them.

Contemporary research on attachment theory has progressed significantly in the examination of adult relations, particularly romantic relationships (Fraley & Shaver, 2000; Hazan & Shaver, 1987). The term transference has been used to describe the notion where people's mental representation of their caregivers influence their perception of significant others in adulthood (Schönbrodt & Asendorpf, 2012). Adult attachment is measured across two dimensions: avoidance and anxiety (Brennan et al., 1998). Attachment anxiety, also termed anxious attachment, encompasses a poor view of the self, which is then reflected by a preoccupation and drive to be close to another within a relational dynamic (Bergeron et al., 2020; Rain & Mar, 2021). This drive is also supplemented by a fleeting sense of relief when those with high attachment anxiety receive attention and emotional intimacy from a close companion (Shaver & Mikulincer, 2007). Attachment avoidance is categorized as having a dismissing, negative view of others, which manifests in hyper self-reliance and avoidance of intimacy, as well as reservedness when engaging in social relationships (Bergeron et al., 2020). Individuals scoring high in attachment avoidance tend to employ strategies such as distracting from intimacy issues (Edelstein & Gillath, 2008) and suppressing memories associated with social relationships (Fraley & Shaver, 2000) in efforts to establish self-reliance and show a lack of desire for human connections (Rain & Mar, 2021).

Some researchers suggest an orthogonal relation between anxiety and avoidance dimensions (Bartholomew, 1990; Brennan et al., 1998). A high level of avoidance with high anxiety is classified as fearful-avoidant, high anxiety and low avoidance is dubbed preoccupied, high avoidance and low anxiety is dismissing-avoidant, and individuals who score low on both scales are said to be more securely attached, possessing positive views of both the self and others. Figure 1 provides a visualisation of the orthogonal nature of the two constructs.

Figure 1

Visualisation of the relationship between attachment anxiety and attachment avoidance



Note. Adapted from "Models of the self and other: Fundamental dimensions underlying measures of adult attachment", by Griffin and Bartholomew, 1994, *Journal of Personality and Social Psychology*, *67*(3), 430.

Adults with insecure attachment are generally seen to possess less than ideal relational traits when compared to secure attachment. Even so, there has been suggestion that insecure traits can be mitigated by a partner with strong emotion regulation abilities (Simpson et al., 2011). Simpson and Rholes (2017) suggest that insecurely attached individuals tend to engage in regulation strategies that

reflect their avoidance and anxiety levels, and that these strategies are primarily employed during high-stress situations. In their paper, three overarching categories of stressful situations were posited. The first was negative external events such as dangerous or stressful scenarios. The second was cognitive or emotional stressors like worrisome thoughts or ruminations. A third category was negative relational events. A negative relational stressor to someone highly avoidant might include a partner's expectation to provide intimacy or emotional closeness, whereas a stressor for an anxiously attached individual could involve scenarios that distance or threaten a relationship with a close other.

Overall et al. (2013) found that it was less likely for individuals to exhibit insecure tendencies when their partners could buffer against their concerns during stressful events. Of course, mitigation of such tendencies is not always a viable option, as it relies on having a partner with strong, compatible emotion regulation behaviours. Dysfunctional dynamics are arguably a more likely result of the evocation of insecurely attached regulation strategies. For example, anxiously attached individuals might see their partner fail to meet their constant need for reassurance, which is then perceived as rejection and causes distress to the individual (Simpson & Rholes, 2017), whereas avoidantly attached individuals show strong associations with commitment aversion, which is then associated with relationship failure (Birnie et al., 2009). This train of thought could lead to actions and behaviour that result in unsatisfying relationships (Meyers & Landsberger, 2002; Vicary & Fraley, 2007). Engaging in intense clinginess or isolation and hoping a close other is able to level it out might be at odds with the reality of nuanced, often complicated behaviours of human partners. This line of reasoning gives rise to the idea of insecurely attached individuals finding benefit in alternative social relations, including through parasocial engagement (Rain et al., 2017; Rain & Mar, 2021; Silver & Slater, 2019).

Attachment in a Virtual World

Cohen (2004) describes finding results of attachment tendencies to include not just real romantic relationships, but imaginary, virtual ones as well. Their finding supports other research in the area which suggests that parasocial relationships and real-life social connections both employ a similar set of psychological functioning (Cole & Leets, 1999; Schönbrodt & Asendorpf, 2012). While retaining some effects of social relationships, parasocial relationships can provide an option to meet relational desires (Slater et al., 2014) without facing the complications of another active human or the risk of being rejected (Rain et al., 2017). In other words, the one-way nature of parasocial engagement does not involve the same effort and investment as a real-life relationship. This may prove to be an especially attractive option for individuals that inherently find difficulty in navigating the intricacies of a bidirectional relationship (Greenwood, 2008), such as those with anxious or avoidant attachments. As much of the research implies, parasocial engagement is often seen through the lens of "suboptimal" social fulfilment. That is, parasocial relationships are generally studied as a substitute for real-life connections for individuals with certain socio-psychological tendencies or habits (Chory-Assad & Yanen, 2005; Derrick et al., 2009; Liebers & Schramm, 2017). But does parasocial engagement primarily serve as ersatz socialization, or could it instead mirror predisposed tendencies to form bonds in reality?

Complementary vs Compensatory Frameworks

Parasocial research is an interdisciplinary area, with most literature stemming from psychology and communications research (Giles, 2002; Liebers & Schramm, 2019). The research literature can generally be classified into two paradigms, a compensatory framework and a complementary framework. The compensatory framework, sometimes known as the substitution hypothesis, suggests that strong engagement with fictional characters stems from an unmet need from an individual's real

life. Those affected, by elements either internal or external, in forming secure human connections, may turn to narratives to satisfy their emotional or cognitive demands. A complementary framework, however, posits that parasocial relationships mimic our social tendencies in reality, albeit perhaps not as robustly. This view suggests that people with solid social bonds are also more likely to develop stronger parasocial engagements, and inversely, people with difficulty in establishing relationships would thus be associated with lower levels of both real and virtual relations. Both frameworks seek to explore individual differences in social ability and satisfaction that might account for the strength of parasocial relationships. This is one reason why adult attachment is often studied in relation to virtual bonds.

Compensatory Framework

Many studies on parasocial engagement are based on the presumption that fictional narratives facilitate social connection when real-life connection is inadequate, suggesting parasocial relations occupy a compensatory role (Liebers & Schramm, 2019). Early research almost unanimously subscribed to the compensation framework of parasocial phenomena (Rubin et al., 1985; Tsao, 1996). Tsao (1996) goes on to postulate that parasocial bonds can accommodate for socialization without the requirements of social skills or the risk of rejection, therefore becoming an attractive option to those who find difficulty in forming real-world connections.

In the realm of attachment, we find several examples showing that insecure attachment in either dimension relates to parasocial engagement. One such example is individuals turning to media figures to cope with feelings of loss or grief in real-life (Greenwood & Long, 2009). Other points of evidence showed that when one experiences high attachment anxiety within a real-life relationship, they were more likely to have greater “imagined intimacy” (Greenwood & Long, 2011) and parasocial intensity (Cohen, 1997) with a media figure. Both these studies imply that parasocial bonds compensate for filling an unsatisfied desire for closeness. Rosaen and Dibble (2016) conducted a study that explored

how attachment anxiety correlates with parasocial relationships of liked and disliked characters They hypothesized that high levels of avoidant attachment should lead to aversions in forming parasocial relations for disliked characters. However, they found that to be true only when an individual was not also lonely and had social anxiety, which are traits that negatively affect real-world social connections. This finding provides further support that parasocial engagement can compensate for relational needs, even for those traditionally aversive to social intimacy or closeness.

External factors affecting socialization have also been used to explore how parasocial engagement makes up for inadequate social bonds. One such factor is a collectivist, conservative culture, which can restrain a person's liberty in developing relationships outside of a familial context. This factor was highlighted in a study by Dinkha et al. (2015). They theorized that a society which limited interactions and openness about dating and social exploration, as exemplified in a Kuwait-based population, would lead to higher levels of parasocial intensity. Their results showed not only a higher percentage of participants who identified as having a parasocial relationship, but the overall strength of these relationships was higher than that of a comparative study conducted by Cole and Leets (1999) using a North American sample. The Covid-19 pandemic was another unique external element that affected the opportunity to engage in physical interaction with other people. Bond (2021) found an elevation in parasocial relationship strength over time when in-person interactions decreased. Importantly, this same elevation was not found for individuals who experienced increased or even unchanged face-to-face interactions through the first few months of the pandemic. These examples demonstrate that access to socialization through virtual worlds can be used to compensate a lack of real-life interactions.

Complementary Framework

Taking an alternative view, people with fulfilling social lives can still very much engage in consuming narratives through books, television and film. A complementary view of parasocial research has seen increased support in recent years (e.g., Eyal & Cohen, 2006; Hartmann, 2017). This idea suggests that individuals consume media and develop parasocial relationships in a manner that mirrors their relationships in real life. In other words, if individuals have a tendency to develop stronger relationships with others in real life, it is also likely to develop relationships of a similar dynamic with fictional characters. Part of this concept stems from the idea that humans are innately hard-wired to interact with people using certain processes, and these processes used are fundamentally the same whether we are interacting physically or through a screen (Perse & Rubin, 1989; Stever, 2017). The train of thought implies that our brain's natural tendencies have not caught up to the technological advances we have access to today.

As we mentioned above, the line between "real" and "parasocial" may not necessarily be divided into separate categories without overlap. A qualitative review by Hartmann (2017) concurs that parasocial relationships are more likely to augment one's social preferences as opposed to being a feature used only in lieu. The study by Cohen (1997) that found compensatory results for men also found the reverse for women, where those in more securely attached relationships were, in fact, more likely to explore and develop parasocial relationships. Greenwood and Long (2011) corroborated the complementary paradigm. They described results suggesting real-life friendship dynamics that mimicked favourite characters of the participants' same gender. Cohen (2004) conducted a study that showed people with higher levels of anxious attachment, when compared to security or avoidance, anticipated feeling worse off from having a character they enjoy taken off-air. He argues that this result mimics the "clinginess" and fear of abandonment that is inherent to attachment anxiety in real life context, and therefore shows support for parasocial relationships in being an extension of one's social circle. With

that being said, research has also shown that being in a committed, dependable relationship can buffer against insecurely attached behaviour and feelings (Simpson & Rholes, 2017). Perhaps, a favourite media character that we constantly have virtual access to creates some form of dependability for insecurely attached individuals. Whether the quality of a relationship predicts how securely attached someone feels, or if in fact, attachment styles shape people's motivations for forming social and parasocial bonds necessitates further research.

The Covid-19 pandemic caused significant limitation on the opportunity for people to socialize and interact with others. Bond (2021) conducted a study during the outbreak using a four-wave panel survey. Results showed that individuals with lower attachment anxiety saw growth and increased stability in both real and parasocial relationships over time. A meta-analysis by Tukachinsky et al. (2020) found that, with the exception of attachment anxiety, the intensity of parasocial relationships is not shown to be associated with suboptimal social traits. In further examining negative social traits, Chory-Assad and Yanen (2005) describe that depression and hopelessness reduced the likeliness of an individual being interested in both real, as well as virtual people. The results from these studies lend credence to a complementary view of parasocial engagement.

Attachment and Parasocial Engagement

Some research posit the idea that attachment tendencies behaviour could stem from bonds with fictional characters. This idea, dubbed parasocial attachment, is a term defined as the freedom and security a person feels when engaged in a relationship with someone they do not know in the real world (Stever, 2013). The term is placed within the umbrella of parasocial experiences but discerns itself as not every virtual dynamic need consist of attachment tendencies (Stever, 2017). While there may be some

benefit in the amalgamation of attachment with parasocial theories, other studies have found promise in exploring how the two constructs relate to each other.

Cohen (1997) conducted one of the earlier empirical studies to introduce attachment theory into the parasocial literature. The study, which explored dating and non-dating subjects, found results that suggested the connection between attachment and parasocial relationships were only evident for those in real-life dating relationships, further describing that men with higher attachment anxiety were more likely to turn to parasocial relationships, whereas women who were securely attached in their real-life relationship were then more inclined to develop parasocial relationships. Later evidence showed that attachment's relation to parasocial engagement was not exclusive to dating participants (Greenwood & Long, 2011). Cole and Leets (1999) found that increased attachment anxiety was most likely to be associated with having a parasocial relationship, whereas high attachment avoidance was least likely. More recently, high anxiety and high avoidance were both categorized as being related to parasocial interaction (Rain & Mar, 2021). The relation between attachment and parasocial bonds has also shown positive results cross-culturally (Dinkha et al., 2015). These studies, as with most parasocial literature, utilize retrospective surveys and analyse associations between the perceived strength of parasocial experiences with the perceived level of attachment insecurity as measured on the avoidance and anxiety dimensions.

Silver and Slater (2019) found support for highly anxious and highly avoidant (fearful) individuals compensating for a lack of social connection through virtual narratives. They go on to suggest that the interaction between the two insecure dimensions implies that when individuals are faced with the social stressors intrinsically linked to attachment anxiety and avoidance, they seek comfort in familiar fictional figures and virtual worlds. Another study exploring the links between the two dimensions found that parasocial relationships were most satisfying for those high in anxiety and low in avoidance, and least satisfying for the opposite (Vicary & Fraley, 2007).

Greenwood (2008) postulated another explanation of the association between attachment and parasocial relationship, finding that the relation was explained by high levels of negative emotions and lower confidence in exerting control. In exploring the "perceived affect" angle, Fraley and Shaver (2000) suggested that the regulation patterns of the attachment anxiety dimension involved emotional appraisals, or how someone feels about a particular situation with a partner, whereas attachment avoidance was regulated by behaviour, in other words, what someone does (e.g., distance themselves). A study conducted in a virtual environment with a digitized version of a real-life partner found results supporting this, where anxiety was uniquely associated with emotional appraisal, while avoidance was predictive of behaviour and actions (Schönbrodt & Asendorpf, 2012). While there have been several theories around what variables and models best explain the relation between parasocial engagement and insecure attachment in general, there has also been research focused on identifying nuances and variations along each dimension of attachment, particularly whether each dimension of insecure attachment has differing effects on parasocial phenomena.

Attachment Anxiety and Parasocial Engagement

Research has shown that greater attachment anxiety predicts greater parasocial engagement (Rain et al., 2017; Rain & Mar, 2021; Silver & Slater, 2019). If anxious individuals depend on external sources of social stimuli for comfort, and anxiously attached individuals inherently struggle with real-life connections, the steady supply of fictional figures seem to be an obvious option. Most of the research in this area demonstrates a positive association between attachment anxiety and parasocial engagement (Cohen, 2004; Cole & Leets, 1999; Greenwood, 2008). Rosaen and Dibble (2016) investigated disliked characters and found the interaction between attachment anxiety and loneliness to be positively predictive of parasocial relationships such that the strength of parasocial relationships was greater when an individual was both highly anxious and felt lonely. They concluded that as attachment anxiety often manifests in a strong desire for companionship, any form of social bond becomes acceptable to an

individual who is both lonely and in need of social connection. Derrick et al. (2009) describe findings that partially support this notion, where people who were lonely, reported relying on favoured TV programs more and felt less lonely while watching them.

Conversely, a meta-analysis found no significant association between loneliness and parasocial relationships (Tukachinsky et al., 2020), which further corroborates that the gravitation toward parasocial experiences is affected especially by attachment anxiety. It could also be interpreted as an anxiously attached individual's loneliness might depend on other factors, such as their current romantic relationships. Bergeron et al. (2020) concluded that individuals with high levels of attachment anxiety were more optimally committed and persisted longer in relationships when their real-life partners were more avoidant. Their suggested reasoning behind this was that perhaps a partner who was withdrawn and showed limited reciprocity confirmed an anxiously attached individual's negative view of themselves, and thus increased the attention and effort invested by the anxious individual in maintaining the relationship. If we drew a comparison to the limited reciprocity in a parasocial dynamic, this could serve as a point of explanation behind the association.

Attachment Avoidance and Parasocial Engagement

Research into the connection between attachment avoidance and parasocial engagement has shown both complementary as well as compensatory dynamics. Some studies have shown that parasocial relationships reflect real-life tendencies in a complementary manner (Cole & Leets, 1999; Vicary & Fraley, 2007). That is in the sense that avoidantly attached individuals, who are less likely to form strong social connections, would also be less likely to develop parasocial bonds. Other research suggests a more nuanced relationship between attachment avoidance and parasocial engagement, often through interaction with attachment anxiety (Rain et al., 2017). Silver and Slater (2019) conducted a study that showed participants who were highly avoidant would be less likely to engage with

narratives, but when an individual was both highly avoidant and highly anxious, they would be more likely to engage in narratives and report greater parasocial relationship scores. Avoidant regulation mechanisms rely on increasing autonomy and hyper-self-reliance in times of stress (Simpson & Rholes, 2017). These mechanisms generally revolve around dictating emotional intimacy on their own terms, which commonly manifests in distancing themselves from close others who are involved in a bidirectional relationship. Parasocial relationships are inherently unidirectional and could theoretically serve as an ideal outlet to both allow for social connection on an avoidant individual's terms, as well as increasing autonomy through identification with a character.

Birnie et al. (2009) conducted a study to explore how attachment styles relate to expectations of a romantic relationship's future. In their study, they found that avoidant attachment was positively associated with commitment aversion, which was then linked with more negative expectations of a relationship. Could it be possible that when an avoidant individual has more control over the emotional intimacy of a relationship, such as in a parasocial relationship, their expectations for relationship failure are not activated and therefore allow for more relational commitment? In a study examining parasocial breakups, Eyal and Cohen (2006) found that parasocial breakups were much less stressful than romantic or platonic breakups in real-life, elaborating that perhaps the dynamic of parasocial relationships allow for enjoyment during the bond without a heavy dependence or worry of loss at the end. This idea may be most pertinent for avoidant individuals that distance themselves from emotional intimacy, as evidence shows that loneliness and social anxiety increase the likelihood of developing strong parasocial relationships (Rosaen & Dibble, 2016). This implies that the connection between attachment avoidance and parasocial engagement requires further investigation.

The Investment Model

As seen above, numerous studies have explored the relationship between parasocial engagement and adult attachment (e.g., Cohen, 1997; Cohen, 2004; Rain & Mar, 2021). Two aspects that have received minimal research attention within this dynamic are the satisfaction received from a parasocial experience, and the level of dependence on engaging in parasocial relationships. Most bidirectional relationships consist of give-and-take, and those that achieve an optimal balance are more likely to persist. Interdependence theory was a concept designed to explain this balance, where it is described that behaviour and choices made during interactions with one another are a function of the anticipated hedonistic rewards relative to expected costs from this relation (Thibaut & Kelley, 1959). The rewards in question here are portrayed as enjoyments, satisfactions, and gratifications that individuals benefit from, whereas example costs are described as anxiety, effort, or conflicting resources that deter them from being part of a social bond.

The investment model, developed by Rusbult (1980a), extends from Interdependence theory as an attempt at empirically measuring relational commitment and dependence. The model posits that the dependence, and consequently relationship length, can be represented in the form of commitment levels as a psychological state. The full model depicts three subfactors that feed into commitment. These subfactors are satisfaction, quality of alternatives, and investment size (Rusbult, 1980a; Rusbult et al., 1998). Satisfaction is measured as rewards minus costs, that is how much benefit to a relationship outweighs its expected drawbacks. Quality of alternatives is the presence of possible interchangeable sources of social fulfilment. This could be described as being in proximity to other suitors in a manner of platonic or romantic relations, or it could be having access to other forms of parasocial experiences in having the time, money, and preference to pursue them. Finally, investment size consists of resources allocated to the relationship that inherently possess an opportunity cost. In other words, time, energy, money, and other assets expended on a relationship that then cannot be spent elsewhere.

The model has been used to examine both romantic relationships and friendships (Branje et al., 2007; Rusbult, 1980b). The applicability to more than just romantic relationships is an appealing avenue to explore the investment model in the context of parasocial relationships. Evidence in the literature suggests that the relevance of the investment within a media context should not be ignored (Boon & Lomore, 2001). Consumers of fictional and media figures today have the opportunity to invest time, effort and money into their parasocial relationships, arguably more so than ever before due to the accessibility of media. Investment-based actions can range from time spent rewatching favourite TV shows on a streaming platform to spending money on tickets to events and merchandise that relate to a specific figure or character.

Few studies have explored the investment model within a parasocial context. Eyal and Cohen (2006) found that commitment to a television show was associated with levels of parasocial relationship, although this study did not use the same measuring instruments from the investment model. Extending this study, Eyal and Dailey (2012) investigated the dynamics of relational maintenance in both real-life friendships and parasocial relationships through the investment model. The results showed that the investment model predicted parasocial relationship strength in a similar manner to real-life friendships. The quality of alternatives subscale measure related to the strength of real-life friendships but was not significantly related to likelihood of developing parasocial relationships. Both the satisfaction and investment size subscale measures were positively linked to real-life and virtual bonds. Whilst Interdependence theory is more overarchingly bidirectional in nature and focuses on partner exchanges during interactions, the investment model aims to measure levels of investment and dependence experienced by an individual, which as we see is able to be extended to parasocial, unidirectional relationships. And seeing as insecure attachments are characteristically defined by over-investment (anxiety) and under-investment (avoidance), we see the model, particularly the investment

size subfactor, as a potential key function in the dynamic between adult attachment and parasocial engagement.

Present Research

Attachment and Parasocial Engagement

The research presented above demonstrates mixed findings for the connection between attachment and parasocial engagement. Parasocial relationships are chosen as one of the main factors of examination in this thesis because it is most likely to resemble the long-term, relational nature of real-life bonds (Rosaen & Dibble, 2016). As attachment is largely characterized similarly, using these paradigms we can make theoretical assumptions about the relation between the two concepts. If a complementary view aligns well with the model, then we predict secure attachment would be related to the strength of parasocial bonds, just as in real life. People who form strong social relationships in reality would also be more likely to form parasocial bonds. If a compensatory lens better explains the model, people higher on attachment insecurity would be more likely to engage in parasocial experiences than those with more secure attachments.

There is room for nuanced view of attachment in relation to different types of parasocial engagement. Seeing as parasocial relationships are fundamentally ongoing and committal, it stands to reason that such a dynamic would be more associated with anxious attachment but be unrelated to the need for space and independence epitomized by avoidant attachment. Character identification is suggested to be more aligned with avoidantly attached individuals who may look up to characters possessing traits they find beneficial to their own need to establish autonomy and self-reliance. Parasocial interaction was theorized to solely relate to anxious attachment, based on the definition of such engagement being perceived as a reciprocal encounter where the character is aware of and

addressing the viewer. While only anxious attachment was initially predicted to show significance in Rain and Mar's (2021) analysis, they found that both attachment anxiety and avoidance were associated with parasocial interaction. The reasoning behind this was suggested to be due to attachment avoidance showing difficulty in reporting on relational dynamics retrospectively (Fraley & Shaver, 1998). Another reason could be that while the amount and consistency of interactions may differ, each interaction may provide avoidantly attached individuals with benefits as the interaction is initiated on their own terms, thus improving its value.

Based on evidence from Noftle and Shaver (2006), the neuroticism personality trait sees a significant positive correlation with attachment anxiety and avoidance, whereas avoidance is shown to have a negative relationship with conscientiousness, extraversion, and agreeableness. The openness trait was shown to not be significantly related to either attachment dimension. As recommended by Rain et al (2017), to rule out the effects of said personality traits, it is beneficial to include such traits in the model to allow for focus on the relational angle of the association between attachment and parasocial engagement. Therefore, as in Rain and Mar's (2021) study, we include four out of the five measures for the big-five model of personality (John & Srivastava, 1999), specifically neuroticism, conscientiousness, extraversion, and agreeableness, to better understand the relation between attachment and parasocial engagement. From this rationale, we formulate the first three research questions of this thesis.

RQ1: What is the relationship between attachment and parasocial interaction?

RQ2: What is the relationship between attachment and parasocial relationships?

RQ3: What is the relationship between attachment and character identification?

In line with evidence from Rain and Mar's (2021) study, we predict finding results consistent with a compensatory framework. For our first research question, we hypothesize both attachment anxiety and attachment avoidance are positively related to parasocial interaction, even after controlling for personality traits. For our second research question, we predict attachment anxiety, but not attachment avoidance, will be positively related to parasocial relationships, and for this to be true when controlling for personality. And for our third research question, we predict attachment avoidance, but not attachment anxiety, to be positively related to character identification, and for this to remain true after controlling for personality traits.

Attachment and Transportability

Transportability, or the tendency to become absorbed into a narrative, is seen to be associated with parasocial relationships (Greenwood, 2008; Greenwood & Long, 2009). Attachment anxiety has also been theorized to relate to transportability, as Green et al. (2004) put forth, immersion into a fictional world may be a prerequisite to becoming close with a character. Rain et al (2017) found an interaction effect between insecure attachment and narrative transportation, where attachment anxiety predicted transportation, but only when avoidance was also high. In this study, we include the measure to examine transportation and its relation to attachment anxiety and avoidance. Transportation's role in the relation between attachment and parasocial engagement has not seen conclusive evidence. Thus, we also conduct analyses examining if transportation interacts with attachment anxiety and avoidance in predicting parasocial relationships.

RQ4: Does attachment avoidance moderate the relationship between attachment anxiety and transportation?

RQ5: Does transportation moderate the relation between attachment style and parasocial relationship?

In accordance with Rain et al. (2017), we predict avoidance moderates the relationship between attachment anxiety and transportation, such that anxiety is positively related to transportation only at high levels of avoidance while not significantly related at low levels of avoidance. We also hypothesize that transportation would moderate the relationship between attachment avoidance and parasocial relationship, where avoidance would be positively related to developing parasocial relationships only at high levels of transportation, and avoidance would not be a significantly related to parasocial relationships at low levels of transportation. We anticipate finding results showing no interaction effect between attachment anxiety and transportation in their association with parasocial relationships.

Attachment, Investment, and Parasocial Relationship

We employ the investment model, particularly the investment size subscale, to better understand the relation between attachment and avoidance. Eyal and Dailey (2012) also include the other two subscales, namely relational satisfaction, and attractiveness of alternatives, in comparing the dynamic between parasocial and real-life relationships. Attractiveness of alternatives was found to be unrelated to the development of parasocial bonds. We believe the relational satisfaction subscale would not be meaningful to measure in the absence of a comparative target, like real-life relationships. And as the inclusion of a real-life comparison was beyond the scope of this study, we decided to solely include the investment size subscale. The inclusion of the investment model in examining the association between attachment and parasocial experiences is an extension of Rain and Mar (2021) and addresses a lacuna in parasocial research. Our sixth research question is as follows:

RQ6: Does relational investment moderate the association between attachment and parasocial relationship?

We theorize that relational investment plays a moderating role in the dynamic and that the role can be explained as such; attachment anxiety is positively related to parasocial relationship with a favourite character when investment is high, and avoidant attachment is positively related to parasocial relationship with a favourite character when investment is low. We further anticipate that avoidant attachment is negatively predictive of parasocial relationships with a neutral character when investment is high, whereas the association between attachment anxiety and parasocial relationship of a neutral character is not conditioned on investment.

Attachment, Enjoyment, and Parasocial Relationship

We also included an enjoyment scale, to investigate whether the relation between attachment and parasocial bonds is borne out of hedonic pleasures related to consuming the narrative, or if the association reflects real-life tendencies. If parasocial relationships stemmed from the enjoyment of a character, we might see a positive effect of enjoyment on parasocial engagement for both attachment dimensions, regardless of affinity toward the character. That brings us to our seventh and final research question.

RQ7: Does enjoyment moderate the relationship between attachment and parasocial relationship?

We predict that parasocial engagement will mirror insecurely attached individuals' appraisal of social bonds and that this would manifest in enjoyment moderating the relationship differently for those high in attachment anxiety versus avoidance. The difference we anticipate is anxiously attached individuals would develop strong parasocial relationships regardless of the level of enjoyment, but avoidantly attached individuals would be more likely to develop parasocial relationships when their enjoyment was high, and that these relationships would only be true for a favourite character but not a neutral one.

Methods

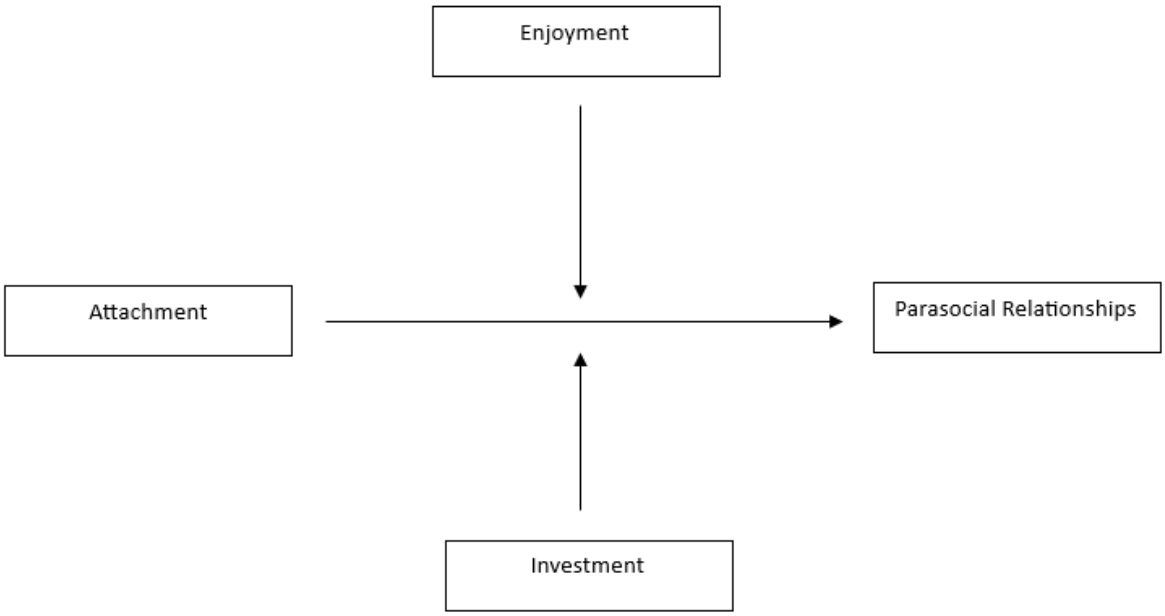
Design

This study was designed to explore if and how relational investment and hedonic enjoyment play a role in the relationship between adult attachment (independent variable) and various measures of parasocial engagement (dependent variable). The measures of parasocial engagement include parasocial relationship, parasocial interaction, character identification, and narrative transportation. The relationship between attachment and parasocial engagement is based in part as an attempt to replicate results from research conducted by Rain and Mar (2021). There are several relational pathways that this current study aims to explore (see Figure 2). The examination of enjoyment and relational investment is a unique extension by this study. Both relational investment and enjoyment respectively were positioned to be analysed as a moderator between attachment and parasocial engagement.

This study was conducted online, with participants filling in an electronic survey that consisted of measures for the variables above, as well as measures for control variables and demographics. Control variables included were transportability, openness, agreeableness, conscientiousness, and neuroticism personality traits, media exposure, and a "neutral character" to control against rater bias and non-character effects. Demographics collected were year of birth, gender, relationship status, and living arrangements. The data collected and analysed was quantitative in nature. Based on Liebers and Schramm's (2019) review of publications on parasocial phenomena, 81.3% use a purely quantitative approach, while 13.7% and 5% use a qualitative and mixed methods approach respectively. Considering the majority of research uses a quantitative approach and the area of research being relatively novel, it was decided that this was the best approach to replicate previous findings as well as further developing the map of potential factors contributing to the dynamic of the relationships. Regression analysis was the method of choice for exploring the effects and relationship strengths of each variable.

Figure 2

How do Enjoyment and Investment affect the relationship between Attachment Style and Parasocial Relationships



Participants

Data collection through the online survey was open from December 2022 to April 2023. Participants were recruited through several avenues. The avenues comprised of convenience sampling by outreach efforts from the primary author which included: Facebook posts on his own page; media posts on community and location-based Facebook groups; media posts on the Neighbourly website within the primary author's geographic area; posts on the Canvas platform by lecturers within the author's affiliated institution (not including the supervisors of this project). Flyers containing QR-codes that directed to the survey landing page were also posted up in local libraries and university campus libraries. Each media or platform post was accompanied by a brief overview of the study, as well as the link to the survey landing page. The landing page contained a more thorough overview of the research

study, contact persons in the event of questions or issues, information about incentives provided in the form of electronic gift cards, as well as participation details and requirements laid out in a common question-and-answer format. On the survey landing page, flyer, and any recruiting material (such as social media posts), viewers were reminded that participation is voluntary, and individuals may exit the survey at any time prior to submission, in which case their data would not be recorded. To avoid coercion, students that were enrolled with any author on this paper were stated not to participate. Before beginning the survey, participants answered a question indicating their agreement to participate, understood that participation was anonymous, and that their data is not able to be removed upon submission (due to the survey being non-identifying).

The total number of respondents was 220. Two respondents were removed due to inattentiveness (large amounts of missing data points and completing the survey in less than 6 minutes), leaving the final number of participants at 218 (N=218). As the measuring instruments did not require an answer to continue, a small number of measures contained missing values. These values were excluded on a pair-wise basis. Completion of the survey ranged between 9.2 minutes and 1367.33 minutes (approximately 22 hours and 47 minutes). Participants were not required to complete the survey in one sitting, and were allowed to continue on their devices as long as it was not cleared from their browser and was within two weeks of their start time. The average time taken to complete the survey was 42.88 minutes. Participants' ages ranged from 16 to 78 years old, with a median age of 29 (three outliers excluded). Gender frequencies were broken down into 60 males (27.5%), 151 females (69.3%), 5 non-binary/third gender (2.3%), 1 preferred not to say and 1 unanswered. 69 participants reported the status of their relationship as single (31.7%), 68 said they were in a relationship (31.2%), 17 selected de facto/civil partnership (7.8%), 52 were married (23.9%), 6 preferred not to say (2.8%), and 6 selected "other" (2.8%). In accounting for living situations, 126 participants reported to be living with family or a

partner (57.8%), 45 had their own accommodation (20.6%), 40 lived in shared housing (18.3%), and 6 selected “other” (2.8%).

Procedure

Participants navigated to the questionnaire by clicking through a link from social media posts or scanning a QR code from a flyer. The landing page of the link contained an information sheet, with a brief overview of the study, description of what participation meant, and explaining that submission of the questionnaire was taken as consent of agreement to participate. Participation involved the completion of the variable scales, the identification of a favourite narrative character and a neutral narrative character, and demographic questions at the end.

No identifying data (e.g., name, device IP address) was extracted from participants in the survey. As the survey was estimated to take a significant time to complete, a setting on the survey platform (Qualtrics) was utilized to allow participants to exit their Internet browser window mid-survey and return to continue where they left off (assuming they didn’t clear their browser cookies and returned within one week from the start of their survey). Due to this feature, the time it took participants to complete the survey varied markedly. Out of 218 responses, the breakdown of time taken for completing the survey was as follows: minimum time 9.2 minutes (two data points from original set were excluded due to being lower than 8 minutes and having multiple missing responses); maximum time 1367.33 minutes, which translate to 22.79 hours; average time 42.88 minutes; median time 26.41 minutes. When excluding the two data points with the longest time, the mean drops to 34.36 minutes.

At the end, participants were reminded of the link they could use to view a summary report of findings. Interested participants were also given the choice to fill in a separate questionnaire to enter a lottery-based prize draw for New Zealand-based grocery store gift vouchers. The link to the prize draw survey was provided at the completion of the main survey. Participates who clicked through were

redirected to a new survey landing page that contained information about the nature of the prize draw. The landing page described that participants had to be physically present in New Zealand to enter the prize draw. Upon declaration that was true, participants were prompted to enter their email addresses in the text box. The information page also described that email addresses were used for the sole purpose of communicating prize draw winners and will be deleted after the distribution of gift cards. The gift cards on offer were Countdown electronic gift vouchers with 2 vouchers worth $200 and 10 vouchers worth $50.

Measures and Material

The online questionnaire in this study included measures for adult attachment styles, parasocial engagement, control variables, and demographics. Parasocial engagement was consisted of three main measures. As the measures examined different aspects of interaction with a media character, they were analysed independently. The measures for parasocial engagement were character identification, parasocial interaction, and parasocial relationship. The control variables that were included in this study were four out of five personality traits from the Big-5 Inventory with the openness trait being excluded (further elaboration below), trait transportability, and time spent viewing media. Participants were also asked to identify one favourite character to base the parasocial engagement measures on, and one neutral character to act as a control against narrative effects.

The measures chosen were primarily based on Rain and Mar's (2021) study but did also consider other pivotal research in the area. While most measures used here were developed within a psychological epistemology, this study also employed measuring instruments stemming from communication sciences. This was to reflect the reality that parasocial research has been heavily influenced by both areas, and may be better explored by bridging the gap between the two.

Adult Attachment

Adult attachment was measured using the Experiences in Close Relationships–Revised (ECR–R) scale (Fraley et al., 2000). This scale contains two subscales, anxiety and avoidance. To score highly on either subscale would indicate insecure attachment, whereas scoring lowly on both indicates secure attachment. Items 1 to 18 form the anxiety subscale, which includes statements such as "I find that my partner(s) don't want to get as close as I would like" and "I often worry that my partner doesn't really love me". Items 19 to 36 form the avoidance subscale, including items such as "I prefer not to show a partner how I feel deep down" and "I find it relatively easy to get close to my partner" (reverse coded). All responses were made on a 7-point Likert scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Scores for each subscale were obtained through averaging responses to the respective items. The Cronbach's alpha in this study for the anxiety subscale was .94, and for the avoidance subscale was .92.

Personality Traits

The Big Five Inventory (BFI-44; John & Srivastava, 1999) was used to measure personality traits. To account for the potential influence on attachment or parasocial bonds, the traits measured were conscientiousness, extraversion, agreeableness, and neuroticism. Consistent with previous studies (Rain and Mar, 2021; Rain et al, 2017), openness personality trait items were excluded from the questionnaire after showing no significant relation to attachment (Noftle & Shaver, 2006). The instrument consisted of 34 items after the removal of openness measures. The instrument utilized a 5-point Likert-scale, ranging from 1 *(strongly disagree)* to 5 *(strongly agree).* Scores for each trait were obtained by averaging the associated items. The Cronbach's alpha coefficients were as follows: Extraversion = .83, Agreeableness = .75, Conscientiousness = .80, Neuroticism = .86.

Trait Transportability

Transportation, defined as the tendency to become absorbed into a narrative (Green, 2002; Green & Brock, 2000), is measured using the Transportability scale (Dal Cin et al., 2002; Dal Cin et al., 2004). The scale extends Green and Brock's (2000) Transportation scale by measuring participant's tendency to become immersed generally across multiple narratives, as opposed to a single event. The measure was included to explore and control against the effect of participants developing stronger bonds solely due to tendency to be transported. Dal Cin et al. (2002) showed a ten-week test-retest reliability range between .62 to .64. Scores for the 20-item scale was obtained through averaging the responses on a Likert-scale between 1 *(strongly disagree)* and 9 *(strongly agree)*. The Cronbach's alpha coefficient for this study was .87.

Media Exposure

Time spent engaging in media (watching television/movies, reading story books, etc.) has been shown to relate to attachment styles and strength of parasocial bonds (Erickson et al., 2019; Silver & Slater, 2019). We included it in this study to control for these effects. Media exposure was measured by asking participants how many hours in an "average day" they spend engaging in story-based based media. We explicitly state that time spent surfing on social media platforms should not be included in this estimate.

Favourite and Neutral Character

In line with Rain and Mar's (2021) study and other previous research (e.g., Cohen, 2004; Greenwood, 2008), participants were asked to name a favourite character. Studies also found that there was stronger parasocial engagement (Tian & Hoffner, 2010) and a growing sense of presence (Gardner & Knowles, 2008) for favourite characters over neutral or disliked characters. As this study was exploring parasocial engagement in relation to adult attachment in relationships, the decision was made to

explore elements of favourite characters and include a neutral character to compare effects of a parasocial relationship, relational investment, and hedonic enjoyment.

The requirements were that the character could be fictional or non-fiction, portrayed in either a movie, television series, book, or even other forms of media, and should be publicly known. Participants were then asked to fill in the title of the narrative for their favourite character, the character's gender, the genre of the narrative, what media source participants primarily used to engage with the character, and to briefly explain why they chose them as a favourite character (within 1 to 5 sentences). Participants also filled in how much time they estimated to spend with their favourite character relative to their previously answered question of time spent engaging in general media, from a scale of 1 (*None*) to 5 (*All of the time*). After completing variable scales for their favourite character, participants were then asked to think of a neutral character. A neutral character was described to be a figure that isn't strongly liked or disliked. The requirements for a neutral character were identical to the favourite character, in addition to being on the same or a similar narrative. Participants were also asked to fill in the neutral character's name and gender.

This study only measured parasocial interaction, and character identification for a chosen favourite character (and not a neutral one). As mentioned above, the differences between a favourite and neutral character were examined through a parasocial relationship, relational investment, and hedonic enjoyment.

Character Identification

Character identification was assessed using a 5-item scale as utilised by Tal-Or and Cohen (2010), and was adapted from Cohen's (2001) original scale. This scale defines identification as the participant's perceived fusion with a character's identity. An example item is "I understand the events in the show the way my chosen character understands them". Responses were given using a Likert scale

ranging from 1 (s*trongly disagree*) to 7 (*strongly agree*) and scored by averaging the total. The Cronbach's alpha coefficient was .85.

Parasocial Interaction

Parasocial interaction was measured using the Experience of Parasocial Interaction scale (EPI; Hartmann & Goldhoorn, 2011). This scale aimed to capture parasocial interaction in the form of perceived effects during exposure to a media character. Parasocial interaction in this study is conceptually distinct from the parasocial relationship measure through its focus on direct effects during a specific interaction, as opposed to the latter's focus on effects that carry on beyond interactions with a character. An example item is "While watching the show, I tend to have the feeling that my chosen character is aware of me." Responses were provided on a scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The Cronbach's alpha coefficient was .98.

Parasocial Relationships

Parasocial relationships with a chosen character were measured using an adapted version of the Parasocial Interaction Scale (Rubin et al., 1985). Five questions were removed from the original 20-item scale, and the parts of the items' language was edited to include all mediums of narrative engagement in the use of this adapted version, as utilized in Rain and Mar's (2021) study. Contrary to the title of the scale, the scale frames the measure of parasocial bonds in the form of enduring relationships and not as specific interactions with parasocial characters (Hartmann & Goldhoorn, 2011). It is also the most commonly used measuring instrument in parasocial research (Liebers & Schramm, 2019). This questionnaire contains 15 items that focus on capturing the long-term, ongoing effects a character has on an individual. An example item is "I think my favourite TV personality is like an old friend". We replaced "my favourite TV personality" with "your chosen character" to allow the acceptance of characters from more than just a television format. Responses were given on a scale ranging from 1

(*strongly disagree*) to 5 (*strongly agree*). The Cronbach's alpha value for a favourite character was .88, and for a neutral character was .94.

Relational Investment

Relational investment is measured using investment items exploring the perceived amount of resources expensed to a relationship (Eyal & Dailey, 2012; Rusbult et al., 1998). This instrument was extracted from the Investment Model scale derived by Rusbult et al. (1998). In the original model, four variables were designed to measure relational persistence using four subscales. These variables were commitment levels, satisfaction levels, quality of alternatives, and investment size. Only the investment size subscale was utilized in this study as the face validity of the items seemed most appropriate in measuring parasocial engagement through the lens of attachment. The investment size instrument originally consisted of ten items, broken down into five "facet" items and five "global" items. In this study, one facet item and two global items were excluded from the original scale due to irrelevance in a parasocial context (e.g., My partner and I have an intellectual life together that would be difficult to replace), leaving four facet and three global items used in this survey.

It was initially suggested that the facet items' aim was to improve the measurement quality of the global items, and the facet items did not necessarily have to be included in the analysis (Rusbult et al., 1998). After conducting a reliability check on the data, and in accordance with Eyal and Dailey (2012), we included all seven items in our study analysis. An example item included is "Compared to other people I know, I have invested a great deal in the relationship with my chosen character". Facet items were ranked on a scale of 1 (*Do not agree at all*) to 4 (*Agree completely*), and global items were ranked on a scale of 1 (*Do not agree at all*) to 8 (*Agree completely*). Scores were computed by converting the global items into a 4-point scale, and then calculating an average value from the total of global and facet items. The Cronbach's alpha coefficient was .89 for a favourite character, and .93 for a neutral character.

Hedonic Enjoyment

Hedonic enjoyment was measured with three items asking the participants about their fondness for their chosen character (Tal-Or & Cohen, 2010). Participants would rank their level of agreement with each statement on a scale of 1 (*strongly disagree*) to 7 (*strongly agree*), and an enjoyment score was calculated based on the mean of these three responses. Item 1 was altered slightly to reflect an ongoing enjoyment instead of the effects of specific exposure. The Cronbach's alpha value for a favourite character was .86, and a neutral character was .88.

Demographics.

The demographics collected for this study were age, gender, current relationship status, and current living situation. Age was collected to explore potential generational differences in relations between attachment and parasocial engagement (see Bernhold & Metzger, 2020; Chory-Assad & Yanen, 2005). Gender has been identified as a potential factor in previous parasocial research. Gender data was used in this study to explore trends between gender differences and to examine gender relations between participants and chosen characters (see Cohen, 1997; Greenwood & Long, 2011; Hall, 2019). Relationship status was recorded to account as a potential factor in associations between attachment and parasocial engagement strengths (Cohen, 1997; Simpson & Rholes, 2017; Vicary & Fraley, 2007). Living situations could conceivably affect the loneliness of individuals, and thus were included as a measure to explore the potential effects of living alone versus with family or in a shared space (Derrick et al., 2009; Rosaen & Dibble, 2016).

Results

In this section, we describe the steps taken to analyse the data from the study, and the order in which we include them below. We first describe findings from the demographics section of the data. Secondly, we dissect data relating to the research questions of the thesis. We divide these research

questions into six main components, which are parasocial relationship, parasocial interaction, character identification, transportation, investment, and enjoyment. In this section, we include results of exploring how attachment styles relate to the components above in an attempt at replicating results from previous studies (Rain & Mar, 2021; Rain et al., 2017) and expanding the literature of parasocial research. Finally, we seek to identify themes or patterns in participants' chosen characters and the method of consuming them. Examples of this section include data on why participants might identify a certain character as their favourite, as well as how much time is spent with their favourite character relative to other sources of media.

We used multiple regression for analyses of the research questions. In all multiple regression analyses, we checked for violations of assumptions. No violations for normality, linearity, multicollinearity, and homoscedasticity were detected in the model unless specified. We also report the standardized regression coefficients for all analyses to allow for ease of comparison. IBM SPSS (Version 29) was used for all analyses in this study. Data were screened to eliminate nonsense values and missing data were excluded pairwise for each respective analysis. Two participants were eliminated for inattentive responding due to large amounts of missing data and completing the survey in under 6 minutes.

Demographics

Age

In our analyses of age, two participants were missing data, and three participants were removed due to inputting an age above 100, leaving the final number at $N = 213$.

Results from a Pearson's correlation suggest a negative relationship between age and attachment anxiety, $r(211) = -.30$, $p < .001$, where anxiety in participants decreased with age. As the data for parasocial interaction was not normally distributed, we used a Spearman's rank order correlation coefficient and found that increasing age was linked to lower parasocial interaction scores, $r(211) = -.26$, $p < .001$, and lower investment in a favourite character $r(211) = -.18$, $p < .01$. We found that older participants were less invested in a neutral characters, as shown with a Spearman's rank order correlation coefficient considering the data did not meet the assumptions for a normal distribution, although this finding was non-significant, $r(209) = -.13$, $p = .06$.

There were no significant associations amongst the ages of participants with avoidance (Pearson's $r = -.04$, $p = .55$), transportation (Pearson's $r < .01$, $p = .98$), character identification (Pearson's $r = -.08$, $p = .27$), parasocial relationship with a neutral character (Pearson's $r = -.03$, $p = .66$), or enjoyment of either favourite (Spearman's $r = -.04$, $p = .53$) or neutral character (Pearson's $r = .01$, $p = .86$).

Gender

The data for participants who identified their gender as "non-binary /third gender" or "preferred not to say" was $n = 6$, or 2.8% of the total participants. As the number was too small for meaningful analysis, we focused on those that identified as "male" or "female". An independent samples *t* test revealed no significant differences between genders for anxious attachment ($p = .64$), avoidant attachment ($p = .33$), character identification ($p = .31$), parasocial relationships with a favourite ($p = .96$) or neutral character ($p = .30$). Using an independent samples *t* test, we did find a marginally significant difference in transportation, where females ($M = 5.95$, $SD = 1.13$) reported a greater tendency to become transported into narratives compared to males ($M = 5.63$, $SD = 1.08$), $t(209) = -1.88$, $p = .06$.

In examining how gender affects parasocial interaction, relational investment, and character enjoyment, Mann-Whitney *U* tests were employed as the distribution of scores for these three variables did not meet the criteria for a normality. The test detected no significant differences across gender for parasocial interaction ($p = .19$). We found a significant difference between males and females in relational investment toward both a favourite and neutral character. For a favourite character, males ($Md = 1.71$, $n = 60$) reported greater investment levels than females ($Md = 1.14$, $n = 151$), $U = 3278.5$, $z = -3.19$, $p = .001$, $r = -.22$. For a neutral character, males ($Md = 1.29$, $n = 60$) were also significantly more invested than females ($Md = 1.00$, $n = 149$), $U = 3131$, $z = -3.74$, $p < .001$, $r = -.26$. We detected a small but significant difference where males enjoyed a favourite character less ($Md = 5.67$, $n = 60$) compared to females ($Md = 6.00$, $n = 151$), $U = 5495$, $z = 2.43$, $p = .015$, $r = .17$, while there was no significant difference for the enjoyment of a neutral character ($p = .52$).

Relationship Status

Relationship status originally included options for single, in a relationship, de facto/civil partnership, married, prefer not to say, and "other". The number of participants that selected "other" and "preferred not to say" were too small to be meaningfully analysed ($n = 12$) and were therefore excluded from examinations of relationships. We also collapsed civil partnerships and marriage into the same category (dubbed partnership), thus creating three distinct categories for analyses of relationship status.

Using a one-way analysis of variance (ANOVA), we found no significant differences amongst relationship statuses for parasocial relationship with a favourite ($p = .42$) or neutral character ($p = .41$), transportation ($p = .93$), character identification ($p = .97$), parasocial interaction ($p = .94$), or enjoyment of a neutral character ($p = .42$). We used a Kruskal-Wallis test and found no significant differences

amongst relationship statuses for investment in a favourite (p = .24) or neutral character (p = .17), as well as enjoyment of a favourite character (p = .32).

A one-way between-groups ANOVA examining anxious and avoidant attachment scores across relationship status violated the assumption of homogeneity of variance, therefore a Kruskal-Wallis test was conducted. A statistically significant difference in anxiety was found between the three types of relationship status (Single, N = 69, Md = 4.11; In a relationship, N = 68, Md = 3.72; Partnership, N = 69, Md = 3.11), χ^2 (2, N = 206) = 17.95, p < .001. A Mann-Whitney U test was conducted to compare the median scores of anxiety across each pairing of relationship status. The test revealed participants who identified as single were significantly more likely to have higher attachment anxiety than those that were in a relationship (U = 7.02, p < .01) or in a partnership (U = 10.46, p = .001).

There was also a statistically significant difference in avoidant attachment scores across relationship status (Single, N = 69, Md = 3.56; In a relationship, N = 68, Md = 2.61; Partnership, N = 69, Md = 2.72), χ^2 (2, N = 206) = 29.68, p < .001. Those that marked single had significantly higher avoidant scores than those in a relationship (U = 19.04, p < .001).

Living Situation

Participants were allowed to select their most applicable living situation from having their own accommodation (n = 45, 20.6%), communal accommodation (n = 40, 18.3%), living with family/partner (n = 126, 57.8%), or “other” (n = 6). The number of participants that selected “other” were too small to be analysed, and were removed for analyses relating to living situations, along with one missing data point, leaving the final total N at 211.

We conducted a one-way ANOVA and used Tukey’s post hoc test to detect a marginally significant difference (p = .06) in attachment avoidance scores between those in a communal living situation (M = 3.34, SD = 0.87) and those living with family or a partner (M = 2.93, SD = 1.00), F (2, 208) =

3.04, p = .05, where people living with family or a partner were likely to have lower attachment avoidance. People who lived in their own space also had significantly lower character identification scores (M = 4.96, SD = 0.93) compared to those who lived with family/partner (M = 5.40, SD = 0.97), F (2, 208) = 3.80, p = .02.

When using a one-way ANOVA to examine differences in levels of anxiety amongst those in different living situations, the assumption for homogeneity of variance was violated, therefore we conducted a Kruskal-Wallis Test. There were significant differences in levels of anxious attachment between those in various living spaces, χ^2 (2, N = 211) = 8.14, p = .02. Those that lived in communal spaces (Md = 4.39, M = 4.14) were significantly more likely to have higher attachment anxiety compared to those living alone (Md = 3.67, M = 3.42), and those living with a family or partner (Md = 3.75, M = 3.57).

Results from a Kruskal-Wallis test did suggest there were differences between living spaces in levels of investment toward a neutral character, χ^2 (2, N = 209) = 6.10, p = .05. Participants who selected living in communal housing (Md = 1.30, M = 1.90) were significantly more invested in neutral characters than those that lived with family or a partner (Md = 1.00, M = 1.51). Neither of these living arrangements differed significantly from living alone (Md = 1.00, M = 1.60).

We used a one-way ANOVA and found no significant differences between living situations for levels of transportation (p = .15), parasocial relationship towards a favourite (p = .47) or neutral character (p = .31), and enjoyment of a neutral character (p = .85). Using a Kruskal-Wallis test, we found no significant differences between living situations for levels of parasocial interaction (p = .13), enjoyment of a favourite character (p = .16), and investment toward a favourite character (p = .18).

Descriptive Statistics and Correlations Amongst Variables

The descriptive statistics for the variables are shown in Table 1. All variables except the enjoyment of a favourite character, investment of both neutral and favourite characters, and parasocial interaction were within the tolerance for assumptions of normal distributions.

Correlations among variables are presented in Table 2. We depict Pearson's coefficients for variables that are normally distributed, and Spearman's rho coefficients for variables that do not meet assumptions for a normal distribution. From the table, we see that attachment anxiety correlates positively with all character engagement variables except enjoyment and trait transportation. Attachment avoidance, on the other hand, is only positively related to parasocial interaction and relational investment and is not significantly related to the other character engagement variables. Both insecure attachment dimensions inversely relate to extraversion, agreeableness, and conscientiousness, while being positively related to neuroticism. Parasocial relationship with a favourite character is positively associated with all other parasocial engagement measures of that character, whereas parasocial relationship with a neutral character is only significantly predictive of enjoyment of a neutral character, parasocial interaction, and investment in both a neutral and favourite character. Scores toward a favourite character that measure identification, parasocial relationship, parasocial interaction, investment, and enjoyment are all positively associated with each other. The tendency to become transported into narratives is also positively related to level of enjoyment of both favourite and neutral characters. Those who reported higher investment in a neutral character are likely to have lower transportation tendencies or identification with a favourite character.

How Does Attachment Style Relate to Parasocial Interaction?

Our first hypothesis was that attachment anxiety and attachment avoidance would be positively related to parasocial interaction. Parasocial interaction was positively correlated with both attachment anxiety, Spearman's rho(216) = .33, $p < .001$, and attachment avoidance, Spearman's rho(216) = .19, $p < .01$, where greater attachment anxiety and avoidance both predicted greater parasocial interaction. Collation of the parasocial interaction data revealed a floor effect, with many participants (38.5%) scoring an average of 1, indicating very low to no effects of parasocial interaction with their favourite character. Due to the non-normal distribution of data, we conducted a tertiary split and recoded the scores by the 33rd, 66th, and 100th percentiles to create low, medium, and high parasocial interaction groups. The 33rd percentile included average scores of 1.00, which indicated low parasocial interaction (n = 84, 38.5%). The 66th percentile scores ranged from 1.01 to 3.67 (n = 64, 29.4%), indicating moderate levels of parasocial interaction. And the final group had scores higher than 3.67, now labelled high parasocial interaction (n = 70, 32.1%).

We then conducted an ordinal regression including attachment avoidance, attachment anxiety, and the interaction term as predictor variables, and the tertiary-coded measure of parasocial interaction as the criterion variable. Attachment avoidance (β = .03, p = .87) and the interaction term (β = -.05, p = .73) were not significant predictors, while attachment anxiety was a significant, positive predictor (β = .56, 95% CI [.30, .83], $p < .001$) of parasocial interaction, implying that greater anxiety was linked to greater parasocial interaction.

When controlling for personality traits in the model, attachment anxiety remained a significant positive predictor (β = .77, 95% CI [.39, 1.14], $p < .001$). Agreeableness was the only other significant predictor in the model, with a negative relationship that suggests greater agreeableness was related to lower parasocial interaction scores (β = -.46, 95% CI [-.75, -.17], $p < .01$).

How Does Attachment Style Relate to Parasocial Relationships?

Our second research question involved the association between attachment style and parasocial relationship. We predicted that attachment anxiety would be positively related to parasocial relationships, while attachment avoidance would not be related. Results from a paired-samples *t* test showed participants had significantly higher parasocial relationship scores with a favourite character (*M* = 4.45, *SD* =0.96) compared to a neutral character (*M* = 3.70, *SD* = 1.15), *t*(215) = 10.85, 95% CI [.62, .89] *p* < .001 (two-sided). The eta squared statistic was .35, indicating a large effect size.

Attachment and Parasocial Relationship (Favourite Character)

We found that greater parasocial relationship scores with a favourite character was significantly associated with higher attachment anxiety, Pearson's *r*(216) = .29, *p* < .001, whereas attachment avoidance was not significantly related to parasocial relationship scores with a favourite character, Pearson's *r* = .04, *p* = .55. In a regression model accounting for shared variance between the dimensions of insecure attachment as well as an interaction effect, attachment anxiety (β = .42, 95% CI [.26, .57], *p* < .001) was a positive predictor of parasocial relationship with a favourite character, while attachment avoidance (β = -.17, 95% CI [-.32, -.02], *p* = .03) was a significant, negative predictor. This suggests that higher parasocial relationship scores are linked to greater attachment anxiety and lower attachment avoidance. The interaction between anxiety and avoidance was only marginally significant (β = .11, 95% CI [-.12, .23], *p* = .08).

Table 1

Table of Descriptives

Variable	*N*	*M*	*SD*	*Md*
Attachment anxiety	218	3.65	1.25	3.83
Attachment avoidance	218	3.07	1.00	3.17
Parasocial relationship (favourite)	218	4.44	0.97	4.47
Parasocial relationship (neutral)	216	3.70	1.15	3.80
Character identification	218	5.27	0.97	5.40
Transportation	218	5.87	1.12	5.75
Extraversion	218	3.05	0.68	3.00
Agreeableness	217	3.65	0.54	3.67
Conscientiousness	216	3.49	0.59	3.44
Neuroticism	216	3.04	0.74	3.00
Enjoyment (neutral)	216	4.76	1.28	5.00
Enjoyment (favourite)	*218*	*5.69*	*1.13*	*6.00*
Investment (neutral)	*216*	*1.50*	*0.81*	*1.00*
Investment (favourite)	*218*	*1.70*	*0.80*	*1.29*
Parasocial interaction	*218*	*2.58*	*1.69*	*2.00*

Note. (Favourite) denotes scores in relation to a favourite character, and (neutral) denotes scores in relation to a neutral character. All scores are on scales of 1 to 7 except the following: Transportation (1 – 9); Extraversion, Agreeableness, Conscientiousness, Neuroticism (1 – 5), Investment (1 – 4). Variables which did not meet assumptions for a normal distribution are noted in italic font, these are Enjoyment (favourite), Investment (neutral), Investment (favourite), and Parasocial interaction.

Table 2

Table of Correlations

	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.	Attachment Anxiety	-													
2.	Attachment Avoidance	.55**	-												
3.	Parasocial relationship (fav)	.29**	.04	-											
4.	Parasocial relationship (neu)	.15*	-.04	.54**	-										
5.	Character identification	.17*	.05	.45**	.07	-									
6.	Transportation	.10	.01	.42**	.10	.46**	-								
7.	Extraversion	-.23**	-.32**	-.05	.06	-.12	-.03	-							
8.	Agreeableness	-.18**	-.23**	.05	-.05	.16*	.21**	.21**	-						
9.	Conscientiousness	-.41**	-.25**	-.12	-.05	-.02	.05	.26**	.38**	-					
10.	Neuroticism	.43**	.14*	.33**	.10	.20**	.28**	-.37**	-.25**	-.38**	-				
11.	Enjoyment (neu)	.08	-.04	.31**	.62**	.13	.15*	-.00	.03	-.00	.05	-			
12.	Enjoyment (fav)	*.08*	*-.01*	*.44***	*.04*	*.38***	*.41***	*-.04*	*.14**	*.10*	*.21***	*.36***	-		
13.	Investment (neu)	*.29***	*.22***	*.16**	*.46***	*-.15**	*-.19***	*-.04*	*-.32***	*-.18***	*-.06*	*.20***	*-.23***	-	
14.	Investment (fav)	*.30***	*.23***	*.33***	*.38***	*-.04*	*-.09*	*-.10*	*-.36***	*-.22***	*.02*	*.09*	*-.10*	*.80***	-
15.	Parasocial interaction	*.33***	*.19***	*.31***	*.38***	*-.04*	*-.09*	*-.04*	*-.30***	*-.24***	*.08*	*.10*	*-.23***	*.66***	*.66***

Note. All correlation coefficients depicted are Pearson's coefficients except for: Enjoyment (fav), Investment (neu), Investment (fav), and Parasocial Interaction, for which Spearman's rho values are depicted in italics. (favourite) denotes scores in relation to a favourite character, and (neutral) denotes scores in relation to a neutral character. * = $p < .05$, ** = $p < .01$.

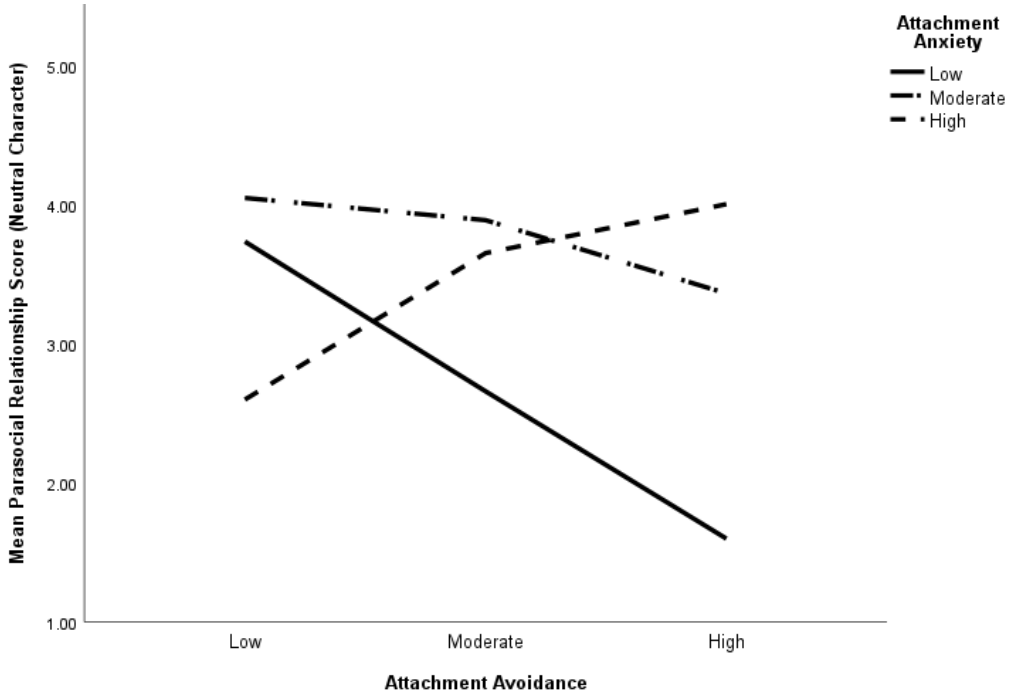
We then conducted a multiple regression analysis to examine the relation between attachment anxiety and parasocial relationships after controlling for personality traits. Attachment anxiety remained a significant positive predictor (β = .29, 95% CI [.11, .46], p = .001) of parasocial relationship with a favourite character when including personality traits, avoidance, and the interaction between anxiety and avoidance in the model, where higher anxiety predicted higher parasocial relationship scores. Neuroticism (β = .29, 95% CI [.14, .44], p < .001) was the only other significant predictor, with higher neuroticism linked to stronger parasocial relationship.

Attachment and Parasocial Relationship (Neutral Character)

Parasocial relationship with a neutral character was positively associated with attachment anxiety, Pearson's $r(214)$ = .15, p = .03, and unrelated to attachment avoidance, Pearson's r = -.04, p = .58. We conducted a regression analysis examining parasocial relationship with a neutral character and found that anxiety (β = .30, 95% CI [.13, .46], p < .001) and avoidance (β = -.18, 95% CI [-.33, -.02], p = .03) were both significant predictors of parasocial relationships with a neutral character, although this was conditional on the interaction between them (β = .16, 95% CI [.04, .29], p = .01). We've established that at moderate levels of anxiety, avoidance is a significant predictor of parasocial relationship with a neutral character. Using a simple slopes analysis, we found that at low levels of attachment anxiety, avoidance remains a significant negative predictor (β = -.34, 95% CI [-.54, -.13], p = .001). At high levels of anxiety, avoidance is no longer significant (p = .89). This shows that at low to moderate levels of attachment anxiety, greater avoidance is associated with a decreased likelihood of developing strong parasocial relationships with neutral characters. This dynamic disappears when an individual is highly anxious (see Figure 3).

Figure 3

Interaction between Attachment Avoidance and Anxiety in predicting Parasocial Relationship with a Neutral Character



Attachment anxiety remained a significant positive predictor toward parasocial relationship with a neutral character even after controlling for personality traits (β = .28, 95% CI [.09, .46], $p < .01$), with the only other significant factor in the model being the interaction between attachment anxiety and avoidance (β = .17, 95% CI [.04, .30], $p = .01$). Attachment avoidance was only marginally significant (β = -.16, 95% CI [-.33, .01], $p = .07$) after controlling for personality traits.

How Does Attachment Style Relate to Character Identification?

Character identification scores were measured toward a participant's chosen favourite character (and not to a neutral character). We hypothesized that identification would positively relate to attachment avoidance, but not relate to attachment anxiety. Contrary to our hypothesis, our data suggest identification with a favourite character was related to attachment anxiety, Pearson's $r(216) = .17$, $p < .01$, but not significantly related to attachment avoidance, Pearson's $r(216) = .05$, $p = .24$.

In regression analysis with both insecure attachments and their interaction term included as predictors, and character identification as the criterion, anxiety was again the only significant predictor ($\beta = .22$, 95% CI [.06, .39], $p < .01$), suggesting that greater anxiety was related to greater identification. Avoidance ($\beta = -.07$, $p = .42$) and the interaction term ($\beta = .06$, $p = .33$) were not significant predictors. When we controlled for personality variables in the regression model, anxiety was a positive predictor, albeit only at marginal significance ($\beta = .16$, 95% CI [-.02, .34], $p = .09$). Agreeableness ($\beta = .22$, 95% CI [.08, .36], $p < .01$) and neuroticism ($\beta = .18$, 95% CI [.02, .33], $p = .03$) were the only other predictors to reach the threshold of significance in the model. As both agreeableness and neuroticism were positive predictors, this suggested that higher scores for agreeableness and neuroticism was linked to greater character identification.

How Does Attachment Style Relate to Transportation?

In exploring how attachment and trait transportation are associated, we predicted that anxiety would be positively related to transportation only at high levels of avoidance while not significantly related at low levels of avoidance. We found both attachment avoidance (Pearson's $r = .01$, $p = .89$) and attachment anxiety (Pearson's $r = .10$, $p = .45$) were not significantly correlated with transportation. When we included both measures as well as their interaction term into a regression model to account

for shared variance, we found that anxiety was a positive predictor of transportation (β = .18, 95% CI [.02, .35], *p* = .03) but this was conditional on the interaction between anxiety and avoidance (β = .15, 95% CI [.03, .28], *p* = .02). Avoidance did not reach significance as a direct predictor (β = -.07, *p* = .40).

We used a simple slopes analysis to explore the interaction between anxiety and avoidance. At low levels of avoidance, anxiety is not significantly associated with trait transportation (β = .03, *p* = .72). Anxiety is significantly predictive of transportation at high levels of avoidance (β = .34, 95% CI [.10, .57], *p* < .01). This suggests that avoidance moderates the relationship between attachment anxiety and transportation, where greater anxiety predicts increased likelihood of greater trait transportation but only at high levels of avoidance, aligning with our prediction.

When controlling for personality traits in the model, anxiety was no longer a significant direct predictor of trait transportation (β = .04, *p* = .66). The interaction between attachment anxiety and avoidance was significant (β = .13, 95% CI [.01, .25], *p* = .03). Greater neuroticism (β = .40, 95% CI [.25, .55], *p* < .001) and agreeableness (β = .26, 95% CI [.12, .40], *p* < .001) were each related to greater trait transportation scores.

Does Transportation Moderate the Relationship Between Attachment and Parasocial Relationships?

To better understand if transportation tendencies had an effect on the strength of parasocial relationships amongst insecurely attached individuals, we examined transportation as a potential moderator within regression models. First, we looked at whether there was an interaction between anxiety and transportation in predicting parasocial relationship with a favourite character. We detected no significant interaction effect (β = .02, *p* = .79) between anxiety and transportation, but both anxiety (β = .25, 95% CI [.13, .37], *p* < .001) and transportation (β = .40, 95% CI [.28, .52], *p* < .001) were

significant, positive predictors at the main effect level. In this model, stronger parasocial relationship linked to greater attachment anxiety and trait transportation.

Next, we examined whether there was an interaction between avoidance and transportation in predicting parasocial relationship with a favourite character. There was no significant interaction (β = .07, *p* = .29), and avoidance was also not a significant predictor at the main effect level (β = .02, *p* = .81). Transportation was a significant positive predictor of parasocial relationship with a favourite character (β = .42, 95% CI [.29, .54], *p* < .001), where higher transportation predicting greater parasocial relationship.

We also explored whether there was an interaction between avoidance and transportation in predicting parasocial relationship with a neutral character. All three predictors; transportation (β = .11, *p* = .13), avoidance (β = -.04, *p* = .62), and the interaction term (β = -.01, *p* = .86), were not significant.

We examined the potential interaction of anxiety and transportation in predicting parasocial relationship with a neutral character. We found no significant interaction (β = -.07, *p* = .24). At the main effect level, transportation was not a significant predictor (β = .09, *p* = .19), while anxiety was a significant, positive predictor, suggesting that higher anxiety related to stronger parasocial relationship with a neutral character (β = .14, 95% CI [.01, .28], *p* = .04).

Does Investment Moderate the Relationship Between Attachment and Parasocial Relationships?

Our sixth research question involved exploring if relational investment had a moderating effect on the relationship between attachment and parasocial relationship. The data for relational investment did not meet the assumptions for a normal distribution. A majority of participants reported an average of 1.00, the lowest possible score, for both a favourite character (31.7%, *n* = 69) and a neutral character

(56.5%, *n* = 122). Attempts at transforming the data did not meet the requirements of parametric analysis.

We first sought to explore if there was a significant difference in reported levels of investment between a favourite character and a neutral character. We used a Wilcoxon Signed Rank Test, which revealed a statistically significant difference in investment levels between a favourite and a neutral character, $z = -6.51$, $p < .001$, $r = -.31$. Participants reported higher investment toward a favourite character (*Md* = 1.29) than investment toward a neutral character (*Md* = 1.00).

We conducted a tertiary split of investment scores at the 33rd, 66th, and 100th percentile to analyse the data within a regression model. For a favourite character, the cut-off values were 1 to 1.14, 1.14 to 1.86, and 1.86 to 3.71. For a neutral character, these values were 1.00 to 1.01, 1.01 to 1.29, and 1.29 to 4.00. These cut-off scores then determined low, moderate, and high levels of investment in a categorical manner respectively. We conducted regression analyses with the inclusion of the categorical version of the investment variable to examine if the association between attachment and parasocial was conditional on investment levels.

Investment, Attachment, and Parasocial Relationship (Favourite Character)

When examining the interaction between attachment anxiety and investment on parasocial relationship with a favourite character, we found no significant moderation effects ($p = .13$). Those with low investment were less likely to have high parasocial relationship scores with a favourite character when compared to people with high relational investment (β = -.60, 95% CI [-.88, -.32], $p < .001$). We note that the regression coefficient for the interaction between low investment and anxiety showed marginal significance (β = .27, 95% CI [-.02, .56], $p = .07$). We used a simple slopes analysis to dissect this further, and found that at low levels of relational investment, attachment anxiety is a significant positive predictor of parasocial relationship with a favourite character (β = .34, 95% CI [.17, .51], $p < .001$), while

at high levels of investment, anxiety is no longer a significant predictor (β = .07, *p* = .56). This suggests that when investment toward a character is low, greater attachment anxiety leads to stronger parasocial relationship scores. When investment is high, attachment anxiety levels are not significantly associated with parasocial relationship towards a favourite character (see Figure 4).

In exploring the interaction between investment and avoidance in predicting parasocial relationship with a favourite character, our results show no significant moderation effect (*p* = .33). Those with low investment were less likely to have high parasocial relationship scores with a favourite character when compared to people with high relational investment (β = -.75, 95% CI [-1.04, -.47], *p* < .001).

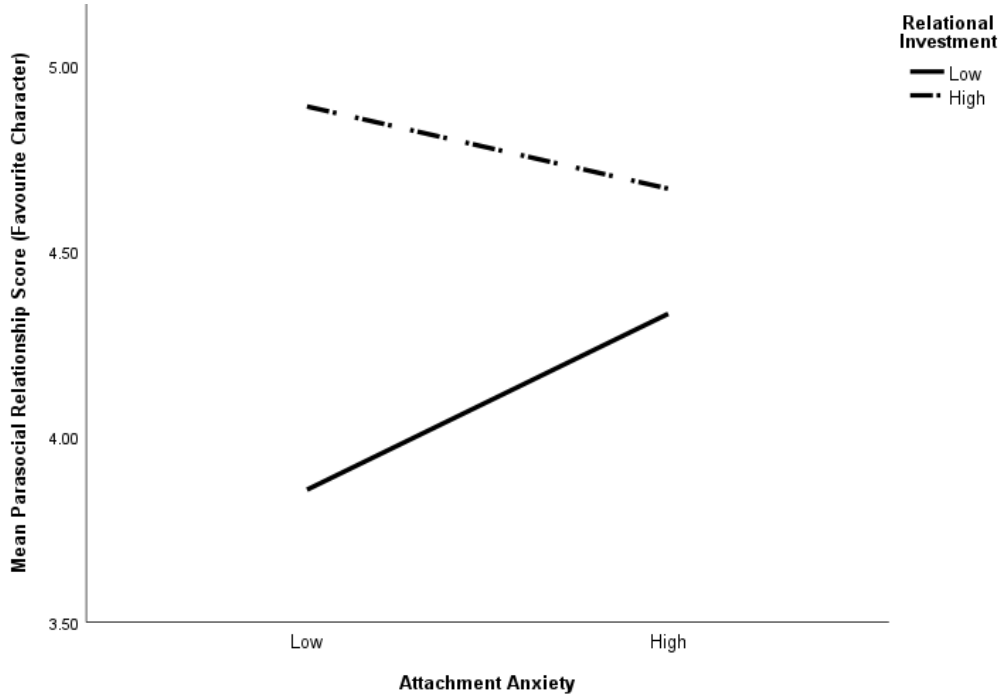
Investment, Attachment, and Parasocial Relationship (Neutral Character)

When analysing the interaction between investment and attachment anxiety in predicting parasocial relationship with a neutral character, no significant moderation effect was observed (*p* = .85). Those with low investment (β = -.77, 95% CI [-1.07, -.47], *p* < .001) and moderate investment (β = -.42, 95% CI [-.78, -.06], *p* = .02) were significantly less likely to have high parasocial relationship scores with a neutral character in comparison to those with high relational investment.

We also investigated potential interaction effects between investment and attachment avoidance in predicting parasocial relationship with a neutral character. No significant interaction effect was observed (*p* = .81). At the main effect level, we found that those with low investment (β = -.84, 95% CI [-1.13, -.55], *p* < .001) and moderate investment (β = -.48, 95% CI [-.83, -.12], *p* = .01) were less likely to have higher parasocial relationship scores compared to those with high investment.

Figure 4

How Investment affects the relationship between Attachment Anxiety and Parasocial Relationship of a Favourite Character



Does Enjoyment Moderate the Relationship Between Attachment and Parasocial Relationships?

We conducted regression analyses to explore interaction effects between attachment style dimensions and hedonic enjoyment in predicting parasocial relationships. Results from a paired-samples *t* test showed that participants reported a significantly higher enjoyment of favourite character (M = 5.70, SD = 1.13) compared to neutral character (M = 4.76, SD = 1.28), $t(215) = 9.85$, 95% CI [0.75, 1.13], $p < .001$. The eta squared statistic was .31, indicating a large effect.

Enjoyment, Attachment, and Parasocial Relationship (Favourite Character)

In analysing how enjoyment interacts with attachment avoidance in predicting parasocial relationship with a favourite character, we found that both the interaction (β = -.01, *p* = .83) and avoidance (β = .05, *p* = .40) were not significantly predictive of parasocial relationship. Enjoyment was a significant, positive predictor of parasocial relationship with a favourite character at the main effect level (β = .42, 95% CI [.30, .54], *p* < .001), where more enjoyment predicted stronger parasocial relationship.

We examined potential interactions between attachment anxiety and enjoyment in predicting parasocial relationship with a favourite character and observed no interaction effect (β = -.01, *p* = .84). Both anxiety (β = .26, 95% CI [.14, .38], *p* < .001) and enjoyment (β = .40, 95% CI [.28, .52], *p* < .001) were significant, positive predictors of parasocial relationship with a favourite character individually, suggesting that more enjoyment and greater anxiety were both linked to stronger parasocial relationship with a favourite character.

Enjoyment, Attachment, and Parasocial Relationship (Neutral Character)

We conducted a regression analysis and detected no interactions between attachment anxiety and enjoyment in predicting parasocial relationships with a neutral character (β = .03, *p* = .49). In this model, attachment anxiety was a marginally significant predictor at the main effect level (β = .10, 95% CI [-.01, .20], *p* = .08), while enjoyment of a neutral character was a significant, positive predictor of parasocial relationship with a neutral character (β = .62, 95% CI [.51, .72], *p* < .001). This suggested that stronger parasocial relationship was linked to greater enjoyment and greater attachment anxiety.

When analysing interaction effects between attachment avoidance and enjoyment in predicting parasocial relationships with a neutral character, we also found no significant interactions (β = .03, *p* = .61). In this model, avoidance (β = -.02, *p* = .75) was not a significant predictor, while enjoyment (β = .63,

95% CI [.52, .73], $p < .001$) was a significant, positive predictor of parasocial relationships with a neutral character at the main effect level, which shows greater enjoyment predicts stronger parasocial relationship.

Exploratory Analyses

We analysed the data reported around participants' general consumption of media, as well as details about their favourite and neutral characters to examine if there were any identifiable themes or patterns. In this section, we explore how often participants engage in media consumption, and how much of that consumption includes a favourite character, to gain a better understanding of the sample population, as well as note any unusual trends. We also examined the genre of reported favourite characters, the medium most utilized to consume narratives, and participant reasoning on why they chose their favourite characters. This allowed us to explore and highlight any notable trends and findings around the type of characters chosen by participants. While we didn't specify types of characters, genres, or media platforms in this study, we recorded these measures to guide us in recommending directions for future research.

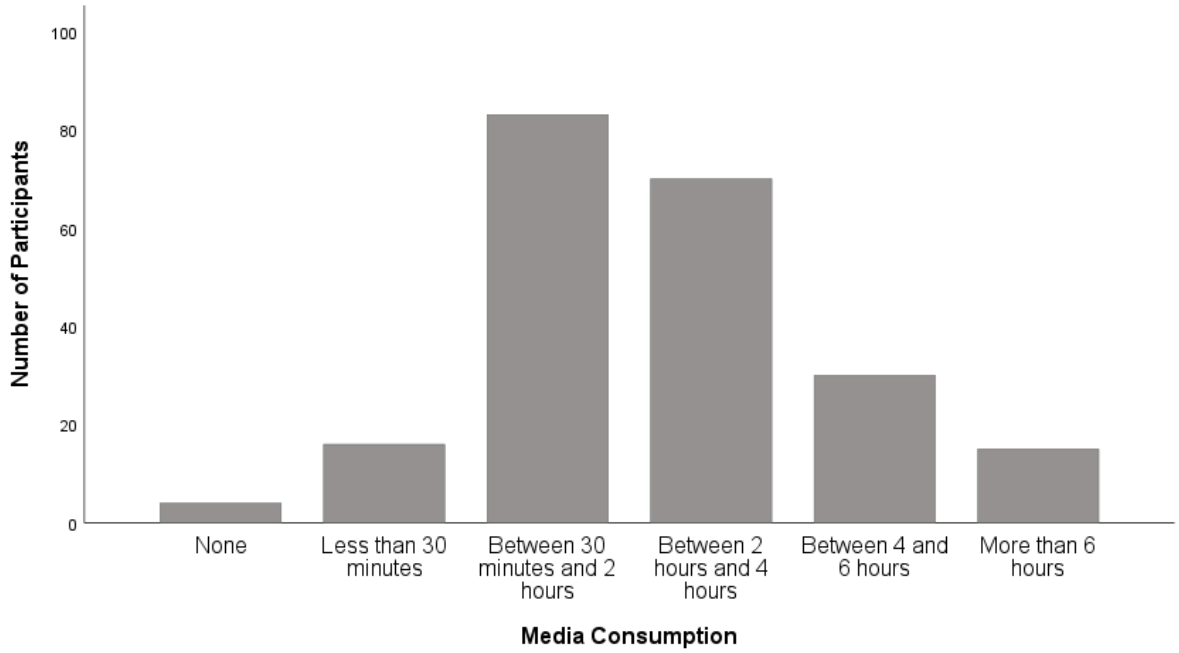
Media Consumption

We asked participants to report on their estimated daily media consumption. It was also specified that for the purposes of this study, to only count time spent with narrative media such as movies, storybooks, or audio narratives, and to avoid counting time spent surfing the Internet or social media. We also asked that participants only included time spent on media for pleasure and not for professional reasons. If media consumption differed significantly between a weekend and a weekday, we asked participants to average it out. The distribution of media consumption is shown in Figure 5. Most participants reported consuming between 30 minutes to 2 hours of media per day, followed

closely by those consuming 2 to 4 hours. Both these categories accounted for 70% of participants. About 7% of participants reported consuming more than 6 hours, and less than 30 minutes of narrative media in a day, and a small number of participants reported no daily consumption.

Figure 5

Estimated Daily Media Consumption



We also asked participants how much time out of their media consumption they thought was spent with their favourite character. 18% said none of the time; we presume this to mean based on recent times of media consumption, although this was never specified in the survey question. 47% estimated about a quarter of their media consumption to involve their favourite character, 23% selected about half the time, 9% said a majority of the time, and 3% selected all of the time.

Favourite Characters

We asked participants to list their favourite characters while specifying that the character can be fictional or non-fictional and portrayed in any form of narrative media. We also asked participants to list the title of the narrative that the character appears on. Some example characters listed by more than one participant were Katniss Everdeen from *The Hunger Games*, Harry Potter, Phoebe Buffay from *Friends*, and Homer Simpson from *The Simpsons*. Some participants also listed the names of actors instead of the characters they portray, for example, Leonardo DiCaprio from *Titanic* and Robert Downey Jr. from *Iron Man.*

We included a section for participants to describe why they selected their favourite character to examine any potential themes. One theme is the affinity for how the story plot around the character reflects our world. An example described by a participant reads: "*The Hunger Games franchise itself is a super complex story that reflects many things that's happening in our world, when it came out and even right now".* Participants also gravitated towards characters they could look up to, citing reasons like "*The way she handles problems within her gang/family"* or "*Realistic. Female. Strong Leader"*. Another theme is the connection to a character's traits, exemplified by one participant who stated "*Melissa is a character that is dear to me, I feel that if I was in that universe, she would take care of me, as if a mother would".* Character realism was also a popular theme, an example description reading *"I relate a lot to how she thinks and acts"* and *"because I relate to her caring and soft personality*". Some participants listed an actor's abilities as a reason for their choice; examples include "*I've watched the actor play this character since the shows conception and he is a wonderful actor*", and "*Captain Jack Sparrow is played by one of my favourite actors, Johnny Depp, who I think is very talented, and gives Jack so much humour, wit, and life*." One other reason that we found was a character's connection to memories and nostalgia, eliciting from reasons like "*my father and I watched The Clone Wars together when I was going through a difficult time, and Ahsoka's character arc from naive and headstrong child to level-headed and savvy*

young woman inspired me greatly as I grew up", and "*Cinderella story had been with me since childhood*".

Genre of Favourite Characters

In this study, we also included an item asking participants to report the genre they consider their favourite characters to be part of. A majority of participants (29%) selected "Drama", with "Fantasy" at 20% and "Comedy" at 17%. 16% of participants selected "Other", where some examples of genres listed by participants included "Romance", "Sci-fi", and "Action" amongst others.

Drama was the most popular option (51%) for those living in their own accommodation and (26%) for those living with family or a partner, but for those in communal living, comedy proved to be the most popular genre (28%) followed closely by fantasy (23%).

Media Source

When analysing the source of media participants most often interacted with their character on, most participants selected a form of motion picture, where 42% selected television shows and 32% chose movies. 15% of participants interacted with their favourite characters through written narratives, 5% through audio sources like podcasts, and 6% selected either news, sports or other forms of media. Some listed forms of other media included "Anime" and "Gaming, story-narrative".

One notable difference in genders is a majority of participants who were male reported viewing their favourite characters through movies (42%), compared to 28% reporting television as their main source. For females, television was the majority selected main method of consumption (47%), with 30% selecting movies.

Gender of Favourite and Neutral Characters

When including participants that identify as other or non-binary, data from our study indicated 60 people reported identifying as male (27%), 151 reported identifying as female (69%), 5 reported identifying as non-binary (2%) and 1 reported preferring not to say (0.5%). When exploring gender dynamics across participants and chosen characters, we only report on those that selected a gender for both themselves and the character in question (participants who had missing values for either category were not included in percentages).

Out of all favourite characters in this study, 54% were male, 41% female, and 4% as non-binary or other. For neutral characters, 56% of participants chose a male character, 39% chose a female character, and 4% chose “other”.

We found that a large majority of male participants (82%) chose a favourite character that aligned with their own gender, whereas about half (51%) of the female participants chose a favourite character they also identified as a female. 55% of males chose both favourite and neutral characters who were male, but only 28% of females chose two female characters. Female participants were more distributed with their characters’ genders, with 27% choosing two male characters, 24% choosing a female favourite and male neutral character, and 16% selecting a male favourite and female neutral character.

Discussion

Aims and Predictions

This study aimed to examine the associations between adult attachment style and tendencies to form parasocial bonds. We also sought to further develop parasocial theory by including measures for enjoyment and level of investment in a relationship. In this thesis, we raised seven research questions,

which investigated attachment styles in relation to: parasocial interaction, parasocial relationship, character identification, transportation, enjoyment, and relational investment. We also included demographic measures to examine the effects of the makeup of our sample, as well as exploratory measures around participants' chosen favourite and neutral characters to highlight any notable patterns or trends.

Our predictions for the study initially centred around the compensatory framework, where higher attachment anxiety and avoidance might indicate a lower likelihood of fulfilling relationships in real life, which in turn would result in these individuals compensating for relational engagement through stronger interactions with favourite characters. The inclusion of attachment style was predicated on the idea that attachment would function as a measure for unmet social relationship needs (e.g., Bergeron et al., 2020; Birnie et al., 2009; Meyers & Landsberger, 2002). We found that those who were not in romantic relationships were more likely to be either anxious or avoidantly attached, which may allude to the idea that it signifies unsatisfied relational needs, but this cannot be definitively inferred without a measure specifically accounting for how satisfied people are with their current social circles.

Our findings instead point to a nuanced understanding of the complementary framework as a better explanation for the association between attachment and parasocial engagement. We found that participants would respond to parasocial measures as an extension of their relational tendencies based on their attachment style. High attachment anxiety was generally associated with an increased tendency to engage with media characters, whereas those highly avoidant were less likely to establish any form of parasocial bond. Our examination of character identification revealed findings diametrically opposed to our initial predictions, which we further discuss below. Both relational investment and hedonic enjoyment did not moderate the association between attachment and parasocial relationship as originally theorized, though both were predictive of parasocial relationship at the main effect level. We explored demographic factors and found results that generally conformed with prior research

particularly with respect to gender, although we made no specific a priori predictions for these demographic factors.

Parasocial Interaction

The first research question in this thesis aimed to examine the relationship between attachment and parasocial interaction. Our predictions for this research question were partially supported. While both attachment anxiety and avoidance were positively correlated with parasocial interaction, only attachment anxiety was a significant predictor in the regression model. Anxiety was a positive predictor even after controlling for personality traits, which supports the notion that the association is based on the relational aspects of the connection to a parasocial character, and not just predisposed individual preferences. Our findings show that greater parasocial interaction is linked to greater attachment anxiety, and is not significantly associated with attachment avoidance. This differs slightly from Rain and Mar's (2021) study, which found both anxiety and avoidance to be significant, positive predictors in a regression model. Studying avoidant attachment within relational contexts using retrospective measures is challenging as there might be inaccuracies in the way avoidant individuals remember and report on relational dynamics (Fraley & Shaver, 2000; Simpson et al., 2010). There may also be differences in sample populations and research methodology. With that being said, while our results do not align with that of Rain and Mar (2021), our results do reflect the connection between avoidance and parasocial relationship as found in other research, which implies that greater avoidance is linked to a reduced likelihood of intense parasocial experiences (Cole & Leets, 1999; Cohen, 2004; Greenwood, 2008).

In light of our results, it stands to reason that the complementary framework describes the connection between attachment and parasocial interaction. Highly anxious individuals might be more inclined to engage in intense interactions regardless if it is parasocial or real-world based, whereas highly avoidant individuals might be less inclined to rely on an external source of intimacy and therefore

perceive parasocial engagements as less intense than those who are highly anxious or securely attached.

Parasocial Relationship

The second research question explored how attachment and parasocial relationships were associated. Our predictions for attachment anxiety aligned with the findings in this thesis, with greater anxiety predicting stronger parasocial relationship levels with both a favourite and neutral character, even after controlling for personality traits. We initially predicted attachment avoidance to be unrelated to parasocial relationships, as found in Rain and Mar's (2021) study. However, our findings indicated that greater attachment avoidance was in fact associated with a decreased likelihood of forming strong parasocial bonds. These findings also provide support for a complementary framework, with attachment anxiety showing a tendency to seek comfort in the form of any social bond, in this case, with both a parasocial favourite figure, as well as a neutral figure. On the other hand, avoidantly attached individuals tend to be commitment-aversive, and this manifests in weaker parasocial relationship bonds, arguably just as in real-life situations.

Research around attachment avoidance and parasocial relationships has shown mixed results. Dinkha et al. (2015) found avoidance to be positively predictive of parasocial relationships, theorizing that the strength of fictional bonds was compensating for an environment that restricted relational ties. Some studies have also shown avoidance to be unrelated to parasocial relationships (e.g., Rain & Mar, 2021; Greenwood, 2008). Our study concurs with the results from Cole and Leets' (1999) work, who found that avoidant individuals were least likely to form parasocial bonds. Silver and Slater's (2019) study examined interactions between the attachment dimensions, and also yielded similar results, suggesting that highly anxious individuals were more likely to have strong parasocial relationships, and dismissing individuals, that is those who are avoidant but not anxious, were less likely to form parasocial bonds.

A potential explanation for the inconclusive findings is the utilisation of attachment measures that focus on romantic behaviour being compared to parasocial relationships that are broadly described as “close relationships”. As in Cole and Leets’ (1999) study, we allowed participants to select a character they considered to be their favourite. This flexibility in choosing a favourite character was intentional, in line with Rain and Mar’s (2021) study. Most of the items within the parasocial relationship measure were phrased in a way that likened an individual’s chosen character to a platonic friend (e.g., I think my chosen character is like an old friend). However, measures for adult attachment style, in particular the ECR-R scale (Fraley et al., 2000), are arguably primarily utilized in examining romantic relationships . There may be some discrepancy between the behaviour people exhibit within romantic relationships and the strength of a parasocial relationship that is likened to friendship. While our study was an attempt at replicating the work of Rain and Mar (2021), and the examination of attachment and parasocial relationship has been conducted in other studies (e.g., Bernhold & Metzger, 2020), we cannot rule out potential effects of the discrepancy between romance-centric attachment measures with more broad parasocial measures within the scopes of this thesis.

One possible way forward is specifically examining characters that participants are attracted to romantically. Tukachinsky (2011) argued that parasocial relationships should be dissected into a romantic and a platonic facet, and conducted a study which validated scales measuring parasocial romance, and parasocial friendship. The differentiating factor for parasocial romance from friendship is that, like real-life relationships, parasocial romance is characterised by attraction towards the character, a desire for closeness, and intense emotion (Tukachinsky, 2011). Adam and Sizemore (2013) conducted a study to compare parasocial romance to real-life relationships and found that people did find benefits in parasocial romances that were similar to real-life relationships. Their findings even include sexual gratification as a benefit reported in both real-life and parasocial romances. Greenwood and Long (2011) found that people who were single reported greater imagined intimacy with characters of the opposite

gender when compared with people in relationships, which could imply a romantic component. In our study, we asked participants to briefly explain the reason for their choice of a favourite character. Amongst these reasons were "*I find him attractive and I like that he always comes to the rescue*" and "*He's very sexy haha* (sic) *but I do like his acting as it does feel like real life*". Considering these reasons, it seems evident there is some overlap between how people feel about their favourite characters. When considering attachment styles as a predictor, perhaps examining parasocial bonds through a separation of romantic versus platonic characters may yield benefits.

Character Identification

We explored how attachment styles relate to identification with a favourite character, initially predicting that identification would relate to attachment avoidance but not to anxiety. Our results turned out be to the reverse of our prediction, showing instead that greater character identification was linked to greater attachment anxiety while being unrelated to avoidance. We initially theorised that the identification aspect of a parasocial bond would cater more to avoidant individuals, who self-soothe by establishing their autonomy and independence through engaging with characters that possess similar traits, as described by Rain and Mar (2021). Arguably, avoidant individuals could then vicariously enhance their own self-reliance through a character's actions in a simulated environment. What we found instead was those that who were more anxiously attached were more likely to have stronger identification with their favourite character.

There are potential theoretical grounds that could explain our findings. One possible explanation is perhaps, instead of assuming the character's identity vicariously, the identification scale functioned more heavily as a measure of empathy, quantifying how much participants would relate to a character while maintaining the distinction between themselves as viewers and characters as separate entities. In Cohen's (2001) original conceptualisation, empathy is described to be a part of identification. Research has suggested a division in the conceptualisation of empathy into cognitive empathy and

affective empathy (e.g., Tsao, 1996). The distinction here is that cognitive empathy is defined as an intellectual understanding of a person's mental state sans emotions (Hogan, 1969), while affective empathy was described as a shared emotional connection when between a viewer and a narrative figure (Stotland, 1969; Stotland et al., 1978). In Tsao's (1996) study, identification was seen to be positively related to affective empathy, but not cognitive empathy. The scale used to measure affective empathy included items such as "many times I have felt so close to someone else's difficulties that it seemed as if they were my own" (Stotland et al., 1978). Considering attachment anxiety includes tendencies to share affective states in an effort to maintain relationships, this could be one explanation of the findings within this thesis. This explanation would align with the results of our study through assuming that empathy is the product of an inclination to form relational bonds, a feature that would reduce the chance of engagement for highly avoidant individuals.

The correlation we found between character identification and transportation supports this idea, as Bal and Veltkamp (2013) have shown that empathy and transportation are positively associated. This is further corroborated by studies showing a positive association between identification and parasocial relationship (Scherer et al., 2022; Tian & Hoffner, 2010). Within our sample, identification also positively relates to parasocial relationship. As findings by Tsao (1996) suggest, perhaps people with more attachment anxiety may have reported identifying with characters through empathising with them as a method to develop stronger connections. This dynamic would allow for an anxiously attached viewer to perceive their favourite character as a distinct being, while also relating to them on certain aspects, as illustrated by the results of this study. With that being said, Cohen (2001) did maintain the focus to be on "sharing the perspective of the character instead of feeling with the character. A study by Chory-Assad and Cicchirillo (2005) also found the identification scale was predicted by cognitive traits and not by emotional tendencies, which provides some support for the measure of identification not

being fully overlapped with empathy. Future research can aim to better dissect the effects of attachment style on cognitive and affective empathy levels.

Transportation

Results from our study align with that of Rain et al. (2017) as well as Silver and Slater (2019). While Greenwood (2008) initially suggested that it was mainly attachment anxiety that was directly predictive of tendencies to become transported into narratives, Rain et al. (2017) examined the interaction between both attachment dimensions and found that greater attachment anxiety was linked to an increased tendency to become transported specifically when an individual was also highly avoidant. Our results corroborate this moderation effect, showing that fearful individuals, that is those that are both highly avoidant and highly anxious, show a greater likelihood of becoming immersed into a fictional world.

Attachment anxiety is characterised by being preoccupied with relationships. It may be then, that anxiously attached individuals who engage in media are drawn to the personalities within the narrative, but do not necessarily become absorbed into the fictional realm itself. Avoidantly attached individuals are said to cope with stressful situations by exerting control and independence. Perhaps fictional realities provide an opportunity to establish autonomy by "escaping" one's own reality into a realm of their choice (see Henning & Vorderer, 2001). Along this line of reasoning, we could assume that one possible explanation is when an individual is both highly avoidant and anxious, they are more inclined to become absorbed and fulfil relational needs in an alternate, fictional reality (Silver & Slater, 2019). If they were not avoidantly attached, they might gravitate instead toward forming real-life social bonds (Rain et al., 2017).

Our analyses of transportation that showed no evidence of moderation provide support for the idea that the proclivity for anxiously attached individuals to form stronger parasocial relationships was

indeed associated with the relational aspects of the dynamic, and not from a tendency to become immersed in an elaborate, fictitious world. This is further exhibited by the fact that attachment anxiety was linked to forming stronger bonds with both a favourite as well as non-favourite character, whereas transportation was only associated to bonds with favourite characters.

Our prediction for the fifth research question in this thesis did not concur with our results. We initially theorised that becoming immersed in a fictional reality would encourage avoidantly attached individuals to form parasocial bonds. Considering that these bonds have a level of intimacy and dependence that is controlled by the viewer, it seems logical that this would appeal to the nature of avoidant individuals, and the relationships would act in a compensatory manner. Instead, our results suggest that the complementary framework is a better fit for the dynamic. As there were no detectable moderation effects, our findings suggest that while avoidant individuals may still become absorbed into a virtual world, their apprehension towards forming committed social bonds remain, mirroring their tendencies in real life (Chory-Assad & Yanen, 2005).

Relational Investment

In this thesis, we included a measure for relational investment to explore what role it might play in the connection between attachment style and parasocial relationships. Seeing as one of the defining features of anxious attachment is an overcommitment to relationships, and avoidant attachment relates to commitment aversion, we theorised that levels of investment in a relationship would function differently within each attachment dimension. Our predictions for this study were that anxiously attached individuals would develop stronger parasocial relationships when they were more invested, and avoidant individuals would be more inclined to have strong parasocial relationships when they were less invested. Our results indicate that while higher levels of investment did predict stronger parasocial relationships, it did not moderate the effects of attachment style.

Another factor to highlight is the items within the investment scale are retrospectively phrased, for example, “I have invested a great deal of time in our relationship”. There may be some overlap in the constructs of levels of investment and the strength of a parasocial relationship. While it is conceivable that investing more into a relationship increases its strength, it is also plausible that a stronger relationship would promote more investment. As such, it is not possible to establish causation within the scope of this study. One idea for future research that involves attachment styles and parasocial relationship is to examine anticipated investment levels instead of perceived current investment. A measure of anticipated investment might relate to actual investment levels, which then possibly determines the strength and sustenance of a relationship. Considering avoidantly attached individuals would be less willing to commit to a social relationship, perhaps a relational dynamic with lower anticipated investment levels would be a positive draw, compared to anxiously attached individuals who would see a higher likelihood of pursuing a relationship when they are willing to invest more into it. As evidenced by Vicary and Fraley (2007), preexisting attachment styles did influence choices made by people within a relationship dynamic. A logical next question would be if people’s attachment styles affected their expectations for a relationship, and whether the structure and resulting reality of that relationship then affected its sustainability.

This suggestion is supplemented by the fact that parasocial relationships have also been similarly explored in a “future-oriented” format. A concept dubbed parasocial breakup (Cohen, 2003) was developed to explore how individuals might feel in anticipation of a character being taken off air, and if their levels of stress were predicted by the strength of parasocial relationship with a character. Analysis of the parasocial breakup concept found that it did relate to the strength of parasocial relationships (Cohen, 2003). Another study by Cohen (2004) explored parasocial breakup in connection to attachment styles, and found that individuals with high attachment anxiety were likely to report the most distress at the thought of a character they enjoyed being taken off the air, whereas secure and

avoidantly attached individuals both were not as significantly distressed. Eyal and Cohen (2006) further examined the concept of parasocial breakup and found that, along with the intensity of the relationship, factors like commitment to the show and participants' loneliness were also significantly predictive of expected distress. They go on to suggest that this showed support for the idea that while real-life and parasocial bonds function differently to some degree, there are grounds that justify the examination of parasocial bonds through interpersonal theories. Eyal and Cohen (2006) also found that while viewers anticipated breakups to be stressful in both contexts, they rated parasocial breakups to be less stressful when compared to real life. This elicited evidence for an important feature of parasocial relationships, where it seems viewers enjoy and engage in them similarly to interpersonal relations without creating a heavy dependence, and thus do not suffer from equal levels of stress during dissolution. Perhaps relational investment could be examined similarly, identifying differences in anticipated investment between attachment dimensions, as well as comparing it to real-life relationships.

Hedonic Enjoyment

This study also included enjoyment as a factor of analysis. We theorised that levels of enjoyment would differentially affect parasocial relationships for an avoidantly attached individual compared to an anxiously attached individual. We initially predicted that enjoyment would not moderate the connection between anxiously attached people and the strength of their parasocial bond, as the tendency to overcommit to a relationship often exhibited by attachment anxiety can manifest in enduring a relationship even when it is not enjoyable. We also predicted that avoidant individuals would develop strong parasocial relationships only when they enjoyed it. While our results did not show a moderation effect, enjoyment was still predictive of the strength of parasocial relationships, be that with a favourite or neutral character.

It may be that the enjoyment measure within this thesis possessed similar issues to the investment measure, in that we account for current enjoyment levels of an ongoing parasocial relationship instead of anticipated levels. One example of a future-oriented measure is a study conducted by Cohen (2004), who found that anxiously attached individuals were more likely than secure or avoidant individuals to feel negatively about a character being taken off the air. While current enjoyment levels may prove to be a significant predictor in an overall model, a moderation effect may be detected specifically when studies examine future-oriented enjoyment. Further research which include anticipated enjoyment levels can explore if anxiously attached individuals would be more willing to develop relational commitments whether or not they expected to enjoy it, and if avoidantly attached individuals are only willing to engage in relationships that they anticipate will bring them sufficient enjoyment.

While we theorise using parasocial engagement as a proxy for real-life social bonds, part of the complementary framework of media use considers that engaging in fictional and real-life relationships does not have to be mutually exclusive. We included enjoyment as one example of hedonistic gratification in this study. Another example of a form of gratification is escapism. Escapism can be defined as seeking a way to cognitively and emotionally withdraw from one's own reality due to various circumstances that affect an individual's life (Henning & Vorderer, 2001). Escapism is connected to trait transportation through the immersion into a narrative universe and arguably differentiates itself through the examination of potential antecedents that motivate an individual to become transported. As we included attachment styles within this study as potential antecedents, we utilized trait transportation and enjoyment as separate constructs instead of escapism.

Enjoyment is also important in the examination of compensatory versus complementary frameworks within parasocial relationships. As mentioned, compensatory use implies a need that is not fulfilled through real-world relationships, which is then remedied within fictional worlds.

Complementary use describes a parasocial relational dynamic that extends real-life relationships. If the complementary framework proves a better fit, as suggested by some of our findings within this thesis, hedonic needs such as enjoyment of said relationship could theoretically play a significant role (Tsao, 1996). As cited by Oliver and Bartsch (2010), hedonistic needs and gratifications that benefit a viewer can range from pleasure-seeking to using entertainment to combat loneliness (e.g., Derrick et al., 2009; Eyal & Cohen, 2006).

Exploratory and Demographic Analyses

This thesis also included additional measures of details for selected characters. As exemplified by previous research (Dibble & Rosaen, 2011; Gardner & Knowles, 2008; Tian & Hoffner, 2010), the examination of characters with various valance, in our case a favourite character versus a neutral character, can help in better understanding certain dynamics, especially when seeking to compare parasocial bonds with interpersonal relationships. The results from this study are consistent with previous findings showing that parasocial engagement levels, enjoyment, and investment were higher for favourite compared to neutral characters. This implies that anthropomorphised characters could have varying effects on people's behaviour and emotions, comparable to how real-world relationships would differ depending on how engaged an individual was within said relationship (Rosaen & Dibble, 2016; Cohen, 2004). Many avenues can be taken by future researchers in investigating nuanced character choices, for example, familiar versus novel characters (see Hall, 2019; O'Brien, 2021) or characters from different time periods or generations (Weispfenning, 2003).

In this study, we briefly accounted for exposure to favourite characters as well as media in general. Some research has shown that the strength of parasocial relationships were associated with the amount of time spent with a character (Tukachinsky & Stever, 2019; Tukachinsky et al., 2020). If we consider the time spent with a character to be associated with parasocial strength, then the findings of

previous research which show that people are more likely to turn to television when they feel lonely, posit some support for the compensatory framework of parasocial engagement (Derrick et al., 2009; Eyal & Cohen, 2006; Rubin et al., 1985). Other studies contend that exposure to a character does not necessarily equate to increased parasocial engagement (Chory-Assad & Yanen, 2005). Tsao (1996) postulates that while people with deficiencies in social relationships may consume television more often, they do not consequentially develop stronger parasocial relationships. Instead, those who were more empathetic, which was described to be a conducive trait for social relationships, were more likely to develop parasocial bonds, which supports the complementary framework. While we did not observe any significant trends of media consumption in this study, it stands to reason that attachment style could prove to be a significant antecedent in people's reliance on narratives in a similar manner as empathy, where perhaps anxiously attached individuals are more likely to develop parasocial commitments, whilst avoidantly attached individuals are likely to consume more media without developing parasocial dependence.

Gender has also been the subject of scrutiny within the parasocial literature. In our study, we found that men were more likely to select male characters, whereas women were more distributed in their choices of characters, which corroborates findings in previous studies (e.g., Chory-Assad & Yanen, 2005; Cohen, 1997; Tian & Hoffner, 2010). Eyal and Cohen (2006) show this to be the case even when participants are asked to select characters from a sitcom with an equal number of female and male leads, going on to suggest that the differences in findings are due to predisposed differences in participants as opposed to merely skewed media representation. While our results showed no significant differences in parasocial engagement measures between genders, we did find that men invested more in their favourite characters whereas women reported enjoying their characters more. This finding for the difference in investment levels mimics results found by Eyal and Dailey (2012), where it is also shown that women are more likely to invest in real-life friendships. They also found that

women were more satisfied with their real-life friendships, whilst men rated higher satisfaction levels within parasocial relationships. This somewhat contradicts our findings which showed women scoring higher levels of enjoyment of their favourite characters. Other research has shown that women generally report stronger parasocial relationships when compared to men (Tukachinsky et al., 2020; Greenwood & Long, 2011). Cohen (1997) suggests that differences in gender could also be due to the differences in the way television is consumed, stating women are more likely to view television as a relational activity, compared to men who utilize television with a gratifications approach. Future studies could benefit from shining a light onto the nuances of narrative consumption itself, including exploring how gender or attachment styles affect tendencies like watching narratives together with a loved one in real-life, bonding with friends over storybooks, or selectively consuming certain genres to vicariously elicit emotions.

Strengths, Limitations and Future Directions

Strengths

We pose several strengths within this thesis. One theoretical strength is the inclusion of a neutral character in measuring parasocial relationship. Previous studies have shown varying effects depending on the relevance of a character to an individual (Gardner & Knowles, 2008; Rosaen & Dibble, 2016; Tian & Hoffner, 2010). Fraley (2002) posits that attachment styles may differ across different relationships. Considering we examined parasocial closeness as a function of attachment style, our inclusion of a neutral character could help explore the specific effects of the character and not just the entertainment of the media source. A measure for neutral character also functioned as a control in allowing us to compare scores for parasocial relationship, investment, and enjoyment, which serves as a methodological strength.

Another theoretical strength is our examination of a subset of the investment model (Rusbult, 1980a) using the relational investment scale. Research has shown the investment model to be relevant within mediated context (e.g., Eyal & Dailey, 2012; Scherer et al., 2021). Our investigation is, to our knowledge, one of the firsts investigations of the investment model together with attachment theory in a parasocial context. The decision to include solely the relational investment subscale was partially to test its effects in association with parasocial relationship strength, whereas the full investment model aims to predict interpersonal commitment to another. Considering that real-life relationships often romantic in nature are measured against commitment to an individual, whereas media characters are often not treated with the same level of exclusivity, we examined relational investment in its effects on the association between attachment and parasocial relationship while excluding measures for quality of alternatives, satisfaction, and commitment. With that being said, it stands to reason that the inclusion of the full investment model, especially the satisfaction subscale, could also prove beneficial in analyses of attachment and parasocial engagement.

Limitations

This study employs the aspects of enjoyment and investment in better understanding the dynamic between adult attachment and parasocial engagement. Parasocial engagement constitutes several types of parasocial experiences, including but not limited to parasocial relationship, parasocial interaction, and character identification. We also include measures of trait transportation, gender, living situations, and neutral character evaluations as evidenced above. Even so, this study is by no means all-encompassing. The road map to understanding parasocial bonds is far from comprehensive. Aspects such as mental health, social buffers, romantic relations, amongst others are all valid factors that demand examination, but are beyond the scope of this thesis.

This thesis is not immune to methodological limitations. Our study design is correlational in nature, and therefore cannot establish directions of causality. We employed an online, anonymous survey with validated measuring instruments, and thus this study also succumbs to the shortcomings of such design (Bethlehem, 2010). These shortcomings include the potential of selection bias, as the recruitment link for the survey was mainly distributed through the primary author's social channels. There is also the possibility of sampling that is not representative of a population. Given that primary distribution was conducted online as well as via university lecturers toward undergraduate students, access to the internet and tertiary education may have affected the resulting sample. While we did not collect measures for participant ethnicity or university enrolment status, caution should be taken in applying the findings from this thesis to populations external to a New Zealand tertiary institution. It also stands to reason that a survey about media consumption that is distributed through media channels may succumb to self-selection bias, and miss out on representation from individuals that rarely consume media. Of course, one could argue that parasocial research perhaps is better served for those who are most likely to consume media in the first place. Nonetheless, more representative samples could allow for an overall better understanding of how engagement with media figures.

Online self-report surveys can suffer from potential of inattentive responding (Meade & Craig, 2012). We did not provide specific attention check items, but our inclusion of participants describing on who their favourite character was and why may reasonably have provided a similar effect. Along with inattention, it is also possible that participants would attempt to provide responses that align with their valence of positive versus negative views, or in support of what they believe a researcher is trying to achieve. Questions around media consumption may be viewed in a negative light if a participant considers watching television to be as such, and thus may create bias in their perceptions of their own media consumption or parasocial dependence. Whilst we conducted reliability and data screening checks for any observable issues, we cannot completely rule out the possibility of issues arising from

participant inaccuracy and bias within this study. Research such as those conducted in a laboratory setting with manipulated variables, experience sampling methods, and longitudinal studies for example are necessary in further refining and developing the parasocial literature.

We also acknowledge the potential for theoretical limitations in this study. In asking participants to name a favourite character, we did not specify the nature of the character beyond a character that is considered “closest to a favourite”. The nature of the relationship could arguably have theoretical effects on the variables. We described the issue of romantically inclined versus platonic characters above. Other important differences could include whether the character is a new favourite that an audience has not seen the end of, or an old character that has been taken off the air (e.g., Hall, 2019), as well as whether the relationship is to the character, or the actor playing the role (Giles & Maltby, 2004). There are also possible differences in forms of consumption. In this thesis, we did not specifically request participants to select characters from a fixed medium. It is conceivable that participants choosing a character from a book might experience different levels of parasocial engagement with characters from a television series or social media platform. Tukachinsky (2014) postulates there are no significant differences in the strength of parasocial relationships when compared across platforms and whether the character was fictional or not, which lends some credence to our study. Another aspect of consumption that could be a factor is whether participants are engaging in a narrative together with people in real-life (i.e., watching a television drama with a spouse), or consuming the content alone. This aspect is presently unaccounted for as it is beyond the scope of this thesis, but being able to connect with someone in real life over a fictional universe could be an important factor in the effects of parasocial engagement.

Our analysis of attachment explored people’s behavioural tendencies in interpersonal relationships. While we presumed that those high on attachment insecurity would have less satisfying social or romantic relationships in real life (Meyers & Landsberger, 2002; Tidwell et al., 1996), we did not

explicitly measure this satisfaction within our thesis. Previous examples of studies have operated under similar presumptions, both with attachment style (Rain & Mar, 2021) and other relation-enhancing traits (Tsao, 1996) as being measures for relational satisfaction. With that being said, it is still possible for individuals to have tendencies that align with higher attachment insecurity while being in a real life relationship or social circle that buffers against their coping mechanisms (Overall et al., 2013; Simpson & Rholes, 2017).

As this study's aim is to explore potential avenues for further inquiry, while re-establishing previous findings over the course of a master's thesis, we believe the design, direction, and decisions around the research to be of a suitable nature in achieving its goal.

Future Directions

There are many potential directions that future research can explore. Above, we have mentioned a few directions as part of our reasoning behind the results of this study. An important direction to consider is the comparison between real-life and parasocial relationships. In its essence, we argue that parasocial relationships form a viable proxy for real interpersonal relationships. While we include two interpersonal theories that have each been examined in parasocial contexts individually (e.g., Cohen, 1997; Scherer et al., 2021), the exploration of how attachment theory stands with the investment model in predicting both parasocial and real-world relationships is one such direction we advocate for further research. Studies that have compared real relationships to parasocial relationships show that while real relationships are often more intense, parasocial relationships can mirror those tendencies at lower intensity levels (Cohen, 2004; Eyal & Dailey, 2012). This could have important implications in aiding those who have issues engaging in real-world social dynamics. While these real-world issues may largely be dispositional in nature, findings developed from this research could also be

applied to those who may not just chronically have suboptimal social relationships, but suffer situationally such as when grieving from the loss of a loved one (Stever, 2017).

Within this thesis, we describe our findings in favour of the complementary hypothesis, where people do not necessarily develop parasocial relationships in compensation for an unsatisfying social life, but as a function of their affinity to relationships in general. This is consistent with previous research (e.g., Tsao, 1996; Cole & Leets, 1999; Cohen, 2004; Rain & Mar, 2021). As such, future research should progress into exploring how socially positive traits are associated with parasocial engagement. Research on positive traits such as creativity (Liebers and Schramm, 2019) or artistic inclinations are much less explored than relationally-inhibiting features like attachment, and therefore should be highlighted as cases for future research within the parasocial literature.

Another area within the parasocial literature that is lacking focus is the effects of culture. Dinkha et al. (2015) found that a "collectivist" culture in a Kuwait population was highly likely to form parasocial relationships, posing that the general likelihood exceeded that of a Western, more individualist culture (Cole & Leets, 1999). An interesting point is that the study notes its participant pool consisted of undergraduate, wealthier individuals who were presumed to consume Westernized media. The juxtaposition of a population living within one culture that is heavily drawn to a parasocial depiction of another culture is novel research on its own. When Schmid and Klimmt (2011) looked to compare the effects of culture on a renowned figure (*Harry Potter*) they found that the strength of parasocial relationships in a German sample and a Mexican sample were in fact similar. Through our recruitment channels, we presume our study findings may apply to a primarily New Zealand sample, which parasocial research has yet to explore in depth. It logically follows that while the levels may differ in dynamics and potential antecedents, parasocial relationships are not exclusively a Western, English-speaking phenomenon, and provide an important avenue for further research amongst other cultures.

Conclusion

In this study, we aimed to investigate parasocial engagement in its relation to attachment style and to introduce a measure of the investment model (Rusbult, 1980a) within that dynamic. We initially theorised producing results that reflected a compensatory framework, where individuals who were either highly anxious or highly avoidant would conceivably have less fulfilling social lives, and therefore compensate with stronger parasocial bonds. The result of our findings combined with that of previous literature suggests a better fit is the complementary framework, in which people connect with fictional characters in a similar manner to the way they might connect with others in real life.

Our attempts at replicating findings from Rain and Mar (2021) were met with partial success. The results from our analysis of parasocial relationship aligned with that of Rain and Mar (2021) and other previous research (Cole & Leets, 1999; Silver & Slater, 2019), showing that greater attachment anxiety was predictive of stronger parasocial relationships, whilst attachment avoidance was associated with weaker parasocial relationships. We found that anxiously attached individuals were more likely to report more intense parasocial interaction, whereas being avoidantly attached had no effect on levels of reported parasocial interaction. This was partly different from Rain and Mar (2021) results, which describe both dimensions of attachment to be related to higher parasocial interaction levels. Our analysis of character identification showed the opposite of Rain and Mar's (2021) findings, where we found an association between identification and attachment anxiety but not avoidance, while their study found identification to be positively related to attachment avoidance but not anxiety. The results around our analysis of trait transportation largely followed previous findings, showing that tendencies to become transported were highest when an anxiously attached individual was also highly avoidant. Our inclusion of relational investment showed that it did not affect the association between attachment and

parasocial relationship, but proved to be a significant predictor in itself. This finding was similar for enjoyment levels of a character, where enjoyment predicted stronger parasocial relationships regardless of attachment style.

To summarize, we postulate that the complementary framework better aligns as an explanation for the dynamic between attachment and parasocial bonds. We found that being anxiously attached increased the chances of developing stronger parasocial relationships, while those that were avoidantly attached seemed less likely to become heavily involved with a fictional character. The examination of relational investment showed that it served as a predictor of parasocial relationship strength, which we hope would spur further research of the investment model within the parasocial realm. The utilisation of interpersonal theories with media figures has shown to provide valuable insight. Future research exploring various ways of using interpersonal theories to examine parasocial bonds, and then comparing those bonds to real-life applications will provide significant benefits to a global population that almost ubiquitously consumes narratives.

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Appendices

Appendix A: Information Sheet

Participant Information Sheet

Thank you for your interest in this study. The aim of this study is to look at how an individual's relationship habits might affect their fondness of fictional characters. If this is of interest to you, I'd love for you to be a part of it.
Before you decide if you would like to participate, it is important that you understand why this research is being done and what your involvement would mean.

My name is Keshav Chandran, I am the primary researcher of this study. I am a student at the Auckland University of Technology, and I am supervised by Dr. Jay Wood and Dr. Rachel Low. Completion of this study will help fulfil the thesis requirement of my Master of Arts degree, and the findings of this research may be used for academic publications and presentations.

Participation is this study is voluntary and whether you choose to participate or not will neither advantage nor disadvantage you. Do take your time to read the following information carefully. The research team of this study can be contacted using the information below if you have any questions or require further clarification.

Research background
This study aims to explore whether Attachment styles and Parasocial engagement are related, and if so, how?

Parasocial relationships are defined as relationships someone may have with a fictional, media-based character or celebrity. Characteristically, this is a "one-way" relationship, where one party is aware of the other, but not vice versa.

Attachment styles are our preferences or habits in a relationship. Attachment styles are measured along two scales, Anxiousness and Avoidance. In this study, we focus on Attachment theory describing the tendencies we would have toward a romantic other, and whether that plays into our engagement with fictional characters.

How was I identified and why am I being invited to participate in this research?
Recruitment for this study was done through ethics-approved channels such as posters on notice boards and through social media. No individuals or groups were specifically sought for participation in this research.

As Dr. Jay Wood and Dr. Rachel Low are part of the research team, we stipulate students that are

currently enrolled in a course with either lecturer are not recruited to be part of the study to avoid coercion and conflicts of interests. These courses are as follows:
AUT: PSYC680, PSYC781, PSYC782.
Victoria University of Wellington: PSYC333.

How do I agree to participate in this research?
Submitting the survey indicates consent to participate in this study. Your participation in this research is voluntary (it is your choice) and whether or not you choose to participate will neither advantage nor disadvantage you. You can stop and withdraw from the study at any time prior to submitting your questionnaire.
Note, there is a prize draw at the end of the survey that participants based in New Zealand have the option of entering. If you choose to enter this, we will need your email address. Should you wish to participate, you will be provided with a link to a different page on our survey hosting site, so your email is not connected to your questionnaire responses. Your email address is only required to contact you about the prize draw and after completion these will be deleted.

What will happen in this research?
As a participant, you will be asked to complete an online survey that takes approximately 20 minutes. This survey asks you questions about your personality, tendencies in a relationship, media-viewing habits, and demographics. Upon completion of the survey, participants based in New Zealand will be given the option to enter a prize draw for grocery store gift cards worth between $50 and $200.

What are the discomforts and risks?
Beyond the time it takes you to complete the questionnaire, there are no expected discomforts or risks associated with participation in this study.

How will my privacy be protected?
Your participation in the study is anonymous. It does not collect your name, or contact details, or the IP address of your device. Any data you provide is aggregated with the other responses. You do not have to answer questions you are not comfortable with. You are also allowed to exit the survey any time before the submission of it. Participants who withdraw prior to submitting will not have any data recorded. Once a survey is submitted, participant withdrawal is not possible as the data is non-identifying. Only non-identifying demographics are used as part of study data. If you complete the survey, you can choose to enter the prize draw by including your email address. This will be part of a separate form, thus keeping your survey data unidentifiable.

At the completion of this study, questionnaire data is kept in collated format by the authors of this paper; Keshav Chandran, Dr. Jay Wood, and Dr. Rachel Low. This data is kept indefinitely to allow for secondary analyses of this study and as an additional safeguard against academic fraud.

Will I receive feedback on the results of this research?
An online report of a summary of findings can be found at the following link upon the completion, submission, and researcher approvals of study. The estimated date of availability is August 31st 2023.

tinyurl.com/ResultsAttachmentParasocial

What should I do if I have concerns about this research?
Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor, Dr. Jay Wood, jay.wood@aut.ac.nz, (+649) 921 9999 Ext.8506.

Concerns regarding the conduct of the research should be notified to the Executive Secretary of AUTEC, ethics@aut.ac.nz, (+649) 921 9999 Ext. 6038.

Whom do I contact for further information about this research?
You may download this Information Sheet below if you wish.
You are also able to contact the research team as follows:

Primary researcher contact details
Keshav Chandran
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Project supervisors contact details
Dr. Jay Wood
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Approved by the Auckland University of Technology Ethics Committee on 1st December 2022, AUTEC Reference number 22/359.

Appendix B: Questionnaire Items

Attachment Scale

36-items. 1=strongly disagree, 7= strongly agree. Items 1- 18 items comprise the attachment-related anxiety scale. Items 19 – 36 comprise the attachment-related avoidance scale. Items 9, 11, 20, 22, 26, 27, 28, 29, 30, 31, 33, 34, 35, and 36 are reversed-coded.

Please answer the questions based on your current relationship. If you are not currently in a relationship, answer the questions based on a potential partner.

1. I'm afraid that I will lose my partner's love.
2. I often worry that my partner will not want to stay with me.
3. I often worry that my partner doesn't really love me.
4. I worry that my partner won't care about me as much as I care about them.
5. I often wish that my partner's feelings for me were as strong as my feelings for him or her.
6. I worry a lot about my relationships.
7. When my partner is out of sight, I worry that he or she might become interested in someone else.
8. When I show my feelings for partner, I'm afraid they will not feel the same about me.
9. I rarely worry about my partner leaving me.
10. My partner makes me doubt myself.
11. I do not often worry about being abandoned.
12. I find that my partner does not want to get as close as I would like.
13. Sometimes my partner changes their feelings about me for no apparent reason.
14. My desire to be very close sometimes scares people away.
15. I'm afraid that once a partner gets to know me, he or she won't like who I really am.
16. It makes me mad that I don't get the affection and support I need from my partner.
17. I worry that I won't measure up to other people.
18. My partner only seems to notice me when I'm angry.
19. I prefer not to show a partner how I feel deep down
20. I feel comfortable sharing my private thoughts and feelings
21. I find it difficult to allow myself to depend on my partner.

22. I am very comfortable being close to my partner.
23. I don't feel comfortable opening up to my partner.
24. I prefer not to be too close to my partner.
25. I get uncomfortable when my partner wants to be very close.
26. I find it relatively easy to get close to my partner.
27. It's not difficult for me to get close to my partner.
28. I usually discuss my problems and concerns with my partner.
29. It helps to turn to my partner in times of need.
30. I tell my partner just about everything.
31. I talk things over with my partner.
32. I am nervous when my partner gets too close to me.
33. I feel comfortable depending on my partner.
34. I find it easy to depend on my partner.
35. It's easy for me to be affectionate with my partner.
36. My partner really understands me and my needs.

Personality Traits

44-items. Scored from 1-5, 1=strongly disagree, 5= strongly agree. “r” denotes reversed-coded.

Extraversion: 1, 5r, 9, 13, ,17r, 21, 25r, 29.
Agreeableness: 2r, 6, 10r, 14, 18, 22r, 26, 30r, 33.
Conscientiousness: 3, 7r, 11, 15r, 19r, 23, 27, 31, 34r.
Neuroticism: 4, 8r, 12, 16, 20r, 24, 28r, 32.

I see myself as someone who…

1. Is talkative.
2. Tends to find fault with others.
3. Does a thorough job.
4. Is depressed, blue.
5. Is reserved.
6. Is helpful and unselfish with others.

7. Can be somewhat careless.
8. Is relaxed, handles stress well.
9. Is full of energy.
10. Starts quarrels with others.
11. Is a reliable worker.
12. Can be tense.
13. Generates a lot of enthusiasm.
14. Has a forgiving nature.
15. Tends to be disorganized.
16. Worries a lot.
17. Tends to be quiet.
18. Is generally trusting.
19. Tends to be lazy.
20. Is emotionally stable, not easily upset.
21. Has an assertive personality.
22. Can be cold and aloof.
23. Perseveres until the task is finished.
24. Can be moody.
25. Is sometimes shy, inhibited.
26. Is considerate and kind to almost everyone.
27. Does things efficiently.
28. Remains calm in tense situations.
29. Is outgoing, sociable.
30. Is sometimes rude to others.
31. Makes plans and follows through with them.
32. Gets nervous easily.
33. Likes to cooperate with others.
34. Is easily distracted.

Transportability

Scale 1-9, 1= strongly disagree, 9 = strongly agree. Items 3, 6, and 15 are reverse-coded.

When watching movies/TV generally for pleasure:

1. I can easily envision the events in the story.
2. I find I can easily lose myself in the story.
3. I find it difficult to tune out activity around me.
4. I can easily envision myself in the events described in a story.
5. I get mentally involved in the story.
6. I can easily put stories out of my mind after I've finished watching them.
7. I sometimes feel as if I am part of the story.
8. I am often impatient to find out how the story ends.
9. I find that I can easily take the perspective of the character(s) in the story.
10. I am often emotionally affected by what I've watched.
11. I have vivid images of the characters.
12. I find myself accepting events that I might have otherwise considered unrealistic.
13. I find myself thinking what the characters may be thinking.
14. I find myself thinking of other ways the story could have ended.
15. My mind often wanders.
16. I find myself feeling what the characters may feel.
17. I find that events in the story are relevant to my everyday life.
18. I often find that reading stories has an impact on the way I see things.
19. I easily identify with characters in the story.
20. I have vivid images of the events in the story.

Character Identification

7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree).

1. I think I understand my chosen character well.
2. I understood the events in the movie the way my chosen character understood them.
3. While viewing, I felt like my chosen character felt.
4. During viewing, I could really ‘‘get inside’’ my chosen character’s head.
5. I tend to understand why my chosen character did what they did.

Parasocial Interaction Scale

7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree).

Normally, when I am interacting with my favourite character, I have the feeling that my favourite character...

1. is aware of me.
2. knows I am there.
3. knows I am aware of him/her.
4. knows I pay attention to him/her.
5. knows that I react to him/her.
6. reacts to what I say or do.

Parasocial Relationship

7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree)

1. When my chosen character shows me how he or she feels about some issue, it helps me make up my own mind about the issue.
2. When I’m watching the program my chosen character is on, I feel as if I am part of the group.
3. I like to compare my ideas with what my chosen character says.
4. My chosen character makes me feel comfortable, as if I am with friends.
5. I see my chosen character as a natural, down-to-earth person.
6. I like hearing the voice of my chosen character in my home.
7. My chosen character keeps me company when his or her program is on television.
8. I look forward to watching my chosen character’s TV show.
9. If my chosen character appeared on another TV program, I would watch that program.
10. My chosen character seems to understand the things I know.
11. If there were a story about my chosen character in a newspaper or magazine, I would read it.

12. I miss seeing my chosen character when his or her program is not on.
13. I would like to meet my chosen character in person.
14. I think my chosen character is like an old friend.
15. I am not as satisfied when other characters replace or overshadow my chosen character.

Relational Investment

Facet items: Scale of 1 to 4, 1= Don't agree at all, 2=agree slightly, 3=agree moderately, 4=agree completely.

Global items: Scale 0-8. 0= do not agree at all, 8=agree completely.

Data for global items converted to a 4-point scale. Total score between facet and global items averaged to achieve relational investment score.

Facet items

1. a. I have invested a great deal of time in our relationship.

b. I have told my chosen character many private things about myself (I disclose secrets to him/her).

c. My sense of personal identity (who I am) is linked to my chosen character and our relationship.

d. My chosen character and I share many memories.

Global items

2. I have put a great deal into our relationship that I would lose if the relationship were to end.
3. I feel very involved in our relationship – like I have put a great deal into it.
4. Compared to other people I know, I have invested a great deal in the relationship with my chosen character.

Hedonic Enjoyment

7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree)

1. I enjoy watching/reading/listening my chosen character very much.

2. If this character will be screened on TV, I will watch it.

3. This is a character that I can enjoy.