

**Anytime, anywhere, and with a variety
of media characters: Parasocial experiences
in viewers' everyday media use**

DOCTORAL THESIS

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Rerum Socialium Doctor / Doctor of Philosophy in Communication (PhD)

by

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The Faculty of Management, Economics and Social Sciences at the University of Fribourg (Switzerland) neither approves nor disapproves the opinions expressed in a doctoral thesis. They must be considered as the author's own (Decision of the Faculty Council of 23 January 1990).

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List of Articles

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Article I: Möri, M., Wirz, D., & Fahr, A. (under review). Exploring Everyday Media Use: Situational Drivers of Parasocial Interactions and Relationships. *New Media and Society*.

Article II: Möri, M., & Fahr, A. (2023). Parasocial Interactions and Wishful Identification with Media Characters: The Role of Perceived and Actual Sociodemographic and Psychological Similarity. *Frontiers in Media Psychology*, 14. <https://doi.org/10.3389/fpsyg.2023.1297687>

Article III: Möri, M. (2024). Farewell on Screen: Uncertainty in Parasocial Relationships and Breakups with Fictional Media Characters. *Poetics*, 103. <https://doi.org/10.1016/j.poetic.2024.101874>

Article IV: Möri, M., Mangold, F., & Fahr, A. (submitted). Measuring Parasocial Processing: The Development and Validation of Multidimensional Short Scale. *Communication Methods and Measures*.

CRediT Statements for the Articles

Table 1.

Overview of authors' contributions to the research articles following the CRediT contribution roles taxonomy.

authors	conceptualization	methodology	investigation	data curation	formal analysis	writing (original draft)	writing (review & editing)	project administration	supervision	funding acquisition
Article I: Exploring Everyday Media Use: Situational Drivers of Parasocial Interactions and Relationships.										
Michelle Möri	x	x	x	x	x	x		x		x
Dominique Wirz	x	x	x				x		x	x
Andreas Fahr	x	x					x		x	x
Article II: Parasocial Interactions and Wishful Identification with Media Characters: The Role of Perceived and Actual Sociodemographic and Psychological Similarity.										
Michelle Möri	x	x	x	x	x	x		x		x
Andreas Fahr	x	x	x				x		x	x
Article III: Farewell on Screen: Uncertainty in Parasocial Relationships and Breakups with Fictional Media Characters.										
Michelle Möri	x	x	x	x	x	x	x	x		
Paper IV: Measuring Parasocial Processing. The Development and Validation of a Multidimensional Short Scale										
Michelle Möri	x	x	x	x	x	x		x		x
Frank Mangold	x	x	x				x		x	
Andreas Fahr	x						x		x	x

Additional Publications

Besides the articles in the dissertation's focus, during my time as a research assistant, I was (co)-authoring additional publications. First, two articles resulted from studies conducted during my master's that focused on health communication. Second, two articles and one handbook chapter focused on questions about the morality of viewers and media characters. Third, collaboration in other research projects resulted in one article about binge-watching and an encyclopedia entry about framing effects.

- Möri, M.,** Wirz, D., & Fahr, A. (2023). Parasocial Relationships with Morally Ambiguous Media Characters. The Role of Moral Foundations. *Studies in Communication Sciences*, 23(3), 259-278. <https://doi.org/10.24434/j.scoms.2023.03.3969>
- Wirz, D., **Möri, M.,** Ort, A., Castro, D., Cordeiro, J., & Fahr, A. (2022). The More you Watch, the More you Get? Re-Examining the Effects of Binge-watching on Entertainment Experiences. *Journal of Media Psychology*. <https://doi.org/10.1027/1864-1105/a000355>
- Möri, M.,** Mongillo, F., & Fahr, A. (2022). Images of Bodies in Mass and Social Media and Body Dissatisfaction. The Role of Internalization and Self-Discrepancy. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.1009792>
- Möri, M.,** Siegenthaler, P., & Fahr, A. (2021). Feeling Pressured by Health Prevention Campaigns as a Motivational Force. Examining the Role of Visual and Verbal Mode Design Features. *Health Marketing Quarterly*, 1-27. <https://doi.org/10.1080/07359683.2021.1995643>
- Möri, M.,** & Fahr, A. (accepted). The Role of Morality in Viewers' Parasocial Relationships with the Hargreeves Siblings in The Umbrella Academy. Ferchaud, A. (Hrsg.). *The Psychology of "The Umbrella Academy."* (Psychgeist of Pop Culture). ETC Press.
- Zai, F., & **Möri, M.** (accepted). Framing Effects. Nai, A., Grömping, M., & Wirz, D. (Hrsg.). *Encyclopedia of Political Communication*
- Möri, M.,** & Fahr, A. (revise & resubmit). Navigating Morality in Parasocial Relationships. Exploring the Dynamics of Affective Disposition, Moral Foundations, and Expectancy Violations in Mediated Relationships. *Mass Communication & Society*.

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1 Parasocial Experiences and Why They (Still) Matter

People want to be friends with Rachel and Ross from *Friends*, they fall in love with Mr. Darcy from *Pride and Prejudice* or Leia from *Star Wars*, they eagerly follow the adventures of James Bond or Wonder Woman, or they join Ted Mosby in his search for the mother of his children. In their everyday lives, people regularly encounter media characters and meaningfully relate to them. Since media content is omnipresent in modern life, media characters are prevalent in people's lives. In 2022, a study in Switzerland showed that adolescents between 12 and 19 years of age indicated audiovisual media content consumption as their favorite leisure activity (Külling et al., 2022). Given this high prevalence of media in everyday life, people often encounter media characters. For example, audience members encounter media characters when watching a movie on the video streaming platform Netflix, when consuming videos on the social media app TikTok, or when watching their favorite television show. Media characters are highly relevant to viewers' media content processing, motivations for their media use, and the possible effects of their media consumption (Klimmt et al., 2006). Well-developed media characters make media content more engaging, relatable, and memorable to audience members (Riis & Taylor, 2019; Smith, 2022). Through meaningful connections with media characters, viewers can escape their daily lives, experience events from a character's perspective, and dive into fictional worlds (D. N. Greenwood, 2008; Klimmt et al., 2006). Thus, media characters are highly relevant for audience members' media use experiences.

Even though these encounters between audience members and media characters can happen through different media outlets, such as TV, social media, streaming platforms, books or newspapers (Liebers & Schramm, 2023), they are all characterized by their one-sidedness (Hartmann, 2008). Media characters can communicate with the audience members, for example, when newscasters or TV hosts, greet them with "hello you ...". The media

personalities cannot see how audience members react to this direct verbal addressing, and audience members cannot respond to them, resulting in the one-sidedness of the mediated encounter. Still, the audience members might experience the illusion of being in a direct social interaction with the media character (Hartmann & Goldhoorn, 2011). Generally, audience members' one-sided encounters with media characters are subsumed under the term parasocial. *Para-* indicates the one-sidedness of the encounter, and *-social* indicates the feeling of intimacy between audience members and media characters that mimics social interactions or relationships (Horton & Wohl, 1956).

Several concepts that explain various aspects of this parasocial phenomenon are present in the academic literature (Dibble et al., 2016; Liebers & Schramm, 2023; Tukachinsky Forster, 2023b): for example, viewers feeling as if they are interacting with a media character despite the one-sidedness of the interaction (*parasocial interactions; PSIs*), viewers' feelings of having a long-term relationship with a media character (*parasocial relationships; PSRs*), or their general psychological processing of such a mediated encounter (*parasocial processing; PSPs*). All these processes can be subsumed under *parasocial experiences* (PSEs), which “connote the psychological aspects of all parasocial phenomena” (Tukachinsky Forster, 2023a, p. 2). Such PSEs are critical for understanding people's media use, since a great deal of content revolves around media characters (Klimmt et al., 2006). These characters mainly influence viewers' media use experiences, and they do so in various ways. Viewers become involved with and affected by media characters (Brown, 2015). Characters add to one's viewing experience by making media content more engaging (Klimmt et al., 2006). They offer inspiration for social learning, serve as role models, and demonstrate ways to handle unique situations (Calvert, 2020). Viewers can supplement their ordinary daily experiences by adding media characters to their social circles (Tukachinsky, 2011). Analyzing

these PSEs in the context of viewers' everyday media use is critical to holistically understanding viewers' media consumption.

In recent years, publications analyzing PSEs have increased drastically. From the appearance of Horton and Wohl's first article on the subject in 1956 to the year 2015, the number of articles published on the subject of PSEs was the same as the number published in the brief period from 2016 to 2020 (Schramm et al., 2022). This drastic increase in scholarly interest in PSEs has also led to the widespread use of parasocial as "a pop culture buzzword" (Tukachinsky Forster, 2023a, p. 1), with articles on PSEs entering cultural discourses and appearing in mainstream news outlets worldwide. Examples of such publications include a *New York Times* article about PSEs with influencers entitled "When Grown-Ups Have Imaginary Friends" (Grose, 2021) and a *BBC* feature on why celebrities may seem like friends to ordinary viewers (Burnett, 2022). In German-speaking countries, discussions of PSEs have appeared in popular and influential media outlets such as *Die Zeit* (Gerland, 2023), *Emotion* (Jüngling, 2023), and *SRF* (Beck, 2022). The widespread and popular adoption of the term parasocial and public discussions about PSEs show the prevalence of the phenomena nowadays.

The scientific and public interest in PSEs underlines the importance of understanding these phenomena in people's everyday media use. Viewer PSEs can be enhanced based on specific traits of the media characters (e.g., attraction and credibility). Early parasocial research was especially focused on viewers' personal characteristics (e.g., attachment style, loneliness) that increase the probability of viewers developing PSEs (Rosengren & Windahl, 1971) or the viewer gratification that motivated them to consume and engage parasocially with mass media (e.g., need for companionship; Rubin et al., 1985). In response to the current media environment, other questions about PSEs have emerged. In their daily media diet, media users encounter various media characters with whom they may engage parasocially.

Thus, research has focused on PSEs and their outcomes (for an overview, see: Schramm et al., 2022), such as how PSEs positively affect intergroup relationships (Schiappa et al., 2005), and on how media consumption in general, and PSEs specifically can improve viewer well-being (Bernhold, 2019). For example, engaging parasocially with media characters increases viewers' enjoyment (Klimmt et al., 2006) and duration of media consumption (Anghelcev et al., 2021; Billard, 2019). PSRs with outgroup media characters can reduce viewers' prejudices or stereotypical attitudes toward people of different races, sexual identities, or who experience mental health issues (e.g., Bond, 2021; Wong et al., 2017). These examples for possible outcomes of PSEs show that viewer PSEs with media characters are essential to other effects of media use.

The general interest in PSEs has resulted in a great deal of research about the phenomena in communication science and beyond (e.g., marketing, health, economics, politics; Liebers & Schramm, 2019). One might question whether PSEs and analyzing them are still important given the amount of already existing research. Despite the amount of research on the topic, there are still significant research gaps because many of the studies do not contribute substantially to the theoretical development of PSEs (Schramm et al., 2022). Additionally, changes in the current media environment have influenced how audience members consume media content; thus, the ways in which they engage with media characters have also changed. In particular, the audience now has more autonomy in media consumption than ever before (Granow et al., 2018; Nanda & Banerjee, 2020). In linear broadcast television, program stations decided which programs are aired when and for how long. With that, the diversity of media characters was limited, and viewers were dependent from these broadcasting stations except for seldomly used DVD boxes (Jenner, 2020). Nowadays, viewers have much more autonomy in their media consumption. For example, on video streaming platforms, viewers can choose to engage with various characters anywhere, at any

time, and for as long as they wish (Flayelle et al., 2020; Granow et al., 2018). This autonomy in media consumption gives viewers significant power over their PSEs and is essential when analyzing present-day PSEs.

This shift in autonomy from TV stations to viewers raises new questions for parasocial research. With which types of media characters do viewers choose to engage parasocially? What are viewers' motives for engaging in PSEs with certain media characters? Thus, given the changes in media consumption, it is necessary to refresh the understanding of PSEs by asking these as yet unanswered questions about a prevalent phenomenon in viewers' *self-directed media consumption*. This dissertation focuses on PSEs in peoples' everyday media use on streaming platforms to respect this shift in autonomy and considering the current media environment. The analysis of streaming platforms as a media outlet where PSEs take place is of great importance due to the ubiquitousness of the streaming platforms in peoples' everyday lives. The use of streaming platforms is widespread around the world (Jenner, 2020): in June 2023, Netflix alone had about 240 million subscribers worldwide. On average, these subscribers spend 3.2 hours per day on the platform (Binns, 2023), and 62% of adolescents in Switzerland use a streaming platform daily (Külling et al., 2022). Besides their popularity, streaming platforms offer viewers access to a wide variety of media content and, with that, diverse media characters. Accordingly, analyzing viewers' PSEs with characters on streaming platforms seems relevant.

People's general media use and the use of content on streaming platforms is embedded in their everyday lives. For example, individuals consume media content on streaming platforms while commuting, cooking dinner, playing sports, or watching something exclusively for entertainment purposes before going to sleep (Flayelle et al., 2017). In each of these media exposure settings, the context can differ significantly. For example, viewers may have different motives for watching something on a streaming platform when they are alone at home than

when they meet with friends and consume media content together. All of these factors are essential to consider when analyzing media use, especially the PSEs that occur during these instances of media exposure. Thus, this dissertation focuses on viewers' *everyday media use* via streaming platforms and on the PSEs that occur in these everyday settings. Through experience sampling surveys, participants' PSEs were analyzed directly after their media exposure to ensure that the results reflected their everyday media use as closely as possible.

Before presenting the four articles that constitute this cumulative dissertation, Chapter 2 provides an overview of the theoretical background of PSEs with different perspectives on PSEs. The various concepts that describe PSEs are defined and differentiated from one another, starting with PSIs (Chapter 2.1), PSRs (Chapter 2.2) and their end labeled parasocial breakups (PSBs; Chapter 2.3), and PSP (Chapter 0). Then, they are put together in a model to form the conceptual framework of this dissertation (Chapter 2.5). Chapter 3 reviews the existing literature on PSEs and highlights gaps in the research to help situate the dissertation's articles within existing research on the subject. Then, Chapter 4 introduces the focus of the dissertation, as well as the overarching research questions and the corresponding links between the research articles. Chapter 5 presents the research articles,¹ and Chapter 6 offers a comprehensive discussion of all research articles, highlights the dissertation's contributions to the existing literature, and provides an outlook on future research on PSEs.

2 Different Perspectives on Parasocial Experiences

Various concepts have emerged within the plethora of research on PSEs. PSEs encompass all of the psychological aspects of these parasocial phenomena (Tukachinsky Forster, 2023a, p. 2). Some of the terms in parasocial literature were used interchangeably or

¹ Articles appear as they were submitted to or published in their respective journals. Deviations from the otherwise underlying standards of this dissertation (for example, APA style and table formatting) are due to the journals' standards. For consistency, the first page of each article has been formatted to align with the dissertation's overall formatting, and to contain the same background information for each article.

the concepts were not defined and differentiated clearly enough (Dibble et al., 2016; Hartmann et al., 2016). This inconsequent use of terms complicates comparisons of findings in PSE research, led to inconsequent use of measurement instruments, and complicated the development of the theoretical background (Liebers & Schramm, 2019). It is therefore important to introduce the theoretical background, the definitions used in this dissertation, similarities and differences to other established parasocial phenomena for PSE in general, and for all the concepts of relevance in this dissertation with PSIs, PSRs, PSBs, and PSP. Thus, before introducing each article's goal, it is necessary to conduct a brief overview of how related concepts and the research field have developed. This is what follows in this chapter. In this section, following a general review, distinct subsections focus on specific theoretical concepts that each describe different aspects of PSEs. The broader theoretical concept of PSEs is used in this dissertation and the included articles as umbrella term, but it can be broken down further into PSIs, PSRs, PSBs, and PSP. For each of these concepts, one subchapter follows.

The first article on PSEs was published by Horton and Wohl (1956) in response to the increasing prevalence of TVs in private households (Abramson, 2003). Horton and Wohl, two sociologists, observed a phenomenon in which people felt a sense of intimacy between themselves and the media characters broadcast to a mass audience. Despite being members of a collective, viewers reacted to characters with intimacy similar to that experienced with social partners. In the case of news presenters, viewers responded to news broadcasts as if they were having real social interactions with the presenters. Some viewers even waited every evening for the news presenter to greet them so that they could greet them back. Horton and Wohl (1956) called this phenomenon "parasocial interaction," with *para-* indicating the one-sidedness of the interaction and *-social* indicating the feeling of intimacy that mimics social interactions. This term, which describes the illusion of a viewer engaging in a real social

interaction with a mediated character or persona, forms the basis for all subsequent research on PSEs (Horton & Wohl, 1956).

The term PSR was also introduced by Horton and Wohl (1956); however, they used PSR to refer to two different phenomena. First, Horton and Wohl used PSR when discussing the interaction between viewers and characters or personas during media exposure. From this perspective, PSRs are limited to media exposure and subsume all PSIs between audiences and media characters that occur during this time (Horton & Strauss, 1957). Second, they defined PSRs as the more enduring relationships that viewers might develop with media characters in the long term based on repeated parasocial encounters with the same character. They compared PSIs to real-life social interactions, in which repeated interactions over time can also result in relationships, and assumed the same to be true of PSIs, which over time result in PSRs (Horton & Wohl, 1956). This conceptual overlap influenced later research. However, Horton and Wohl provided the foundation for all subsequent research on PSEs.

The phenomena of PSI and PSR were taken up in later media research, often in combination with the uses and gratifications theory (e.g., Rosengren & Windahl, 1971; Rubin et al., 1985). During the time of uses and gratifications research, PSIs were considered gratifications sought out by lonely viewers or viewers with a high need for interaction (Rubin et al., 1985). People with weak social competencies were thought to address their need for social closeness through PSIs with media characters (Rosengren & Windahl, 1971). Additionally, Horton and Wohl's strong focus on the illusion of interacting with a media character became less important, and the studies tended to define PSEs as the gratification resulting from general media exposure. In this phase of research, PSIs were often seen as a deficient phenomenon for viewers who lack social interactions (Hartmann, 2010). In this early parasocial research, PSIs and PSRs were seldom differentiated and were even used interchangeably (e.g., Babrow, 1987; Nordlund, 1978; Rubin et al., 1985), especially by

Rubin and colleagues (1985), who played a key part in this by not distinguishing between PSIs and PSRs and defining both concepts as some kind of media involvement that “may take many forms, including seeking guidance from a media persona, perceiving media personalities as friends, imagining being part of a favorite program’s social world, and desiring to meet media performers” (Rubin et al., 1985, p. 156). With this focus, they applied a longer-term perspective to viewers’ PSEs and dissolved PSI’s specific definition as the illusion of an interaction. Based on this perspective, Rubin and colleagues developed the PSI Scale, which was subsequently widely applied, to assess viewers’ parasocial engagement with media characters. This development in parasocial research created further inconsistencies in the uses and definitions of these concepts (Liebers & Schramm, 2023).

In the first decade of the twenty-first century, Hartmann and Schramm introduced PSP as another element of PSEs (Hartmann et al., 2004; Schramm & Hartmann, 2008). As defined by Hartmann and Schramm, PSP refers to the processes of perception that media characters trigger in viewers. PSP therefore assumes that the perception of a media character always leads to some kind of reaction from the viewers, cognitive, affective, or conative (Schramm & Hartmann, 2008), which further eroded Horton and Wohl’s (1956) precise conceptualization of PSI as the illusion of viewer interactions. PSP is a much broader concept that covers viewers’ overall psychological involvement with media characters (Klimmt et al., 2006). In the research that has followed since, the PSI-Process Scales (Schramm & Hartmann, 2008) is often used to assess viewers’ PSP. As the name of the scale refers to PSI, researchers often argue against measuring PSI, even though the scale was developed to measure viewers’ PSP. This development of the scale led to the introduction of the new term PSP and, due to the scale’s name, some ambiguity in its application.

In the 2010s, interest in research on PSEs increased significantly and continued to be a topic of interest, leading to many publications about PSEs in communication and media

science and other research areas, such as economics, health communication, marketing, and gaming research (Liebers & Schramm, 2016). More than half of the existing studies on PSEs were published after 2014, but all of them reflect developments by Horton and Wohl, the uses and gratifications perspective on PSEs, and the inconsistent use of terms and definitions within the field (Schramm et al., 2022). Thus, more recent research stresses the importance of clearly differentiating PSEs, such as PSI, PSR, and PSP, from each other (Dibble et al., 2016; Giles, 2002; Liebers & Schramm, 2019). Within the plethora of PSE research, these concepts are often undertheorized, and several researchers have stressed the need for better theoretical groundwork (e.g., Giles, 2002; Hartmann et al., 2016; Schiappa et al., 2005). This call for theoretical improvements has resulted in several theoretical developments regarding PSEs. The field of communication science, for example, has established clear definitions of PSI and PSR that clearly differentiate between both concepts (for an overview, see Tukachinsky Forster, 2023b), and most recent and ongoing research within that community applies these definitions (Liebers & Schramm, 2023).

As PSEs are at the core of all the articles that constitute this dissertation, the following sections presents different definitions for each concept and defines the concept for the subsequent use in the dissertations. Additionally, the subchapters compare and differentiate PSIs (Chapter 2.1), PSRs (Chapter 2.2), PSBs (Chapter 2.3), and PSP (Chapter 0). Finally, a conceptual model is built based on the definitions introduced and the general theoretical background to form the framework of this dissertation (2.5).

2.1 Parasocial Interactions with Media Characters

PSIs originate with Horton and Wohl's initial definition, which describes them as the viewer's illusion that they are engaging in a real (bidirectional) social interaction when, in fact, the interaction is one-sided (Horton & Wohl, 1956). Horton and Wohl's (1956) definition of PSIs describes them as a "simulacrum of conversational give-and-take" that audience

members experience during media exposure as a reaction to a media character (p. 215). Importantly, PSIs are limited to an instance of media exposure and do not develop beyond if the exposure has ended. Horton and Wohl explain PSIs as an illusory, intimate, reciprocal social interaction that takes place, even though viewers are well aware that it is an illusion. PSIs were assumed to be similar to face-to-face interactions (Liebers & Schramm, 2019); therefore, PSIs can be triggered by media characters by acknowledging the audience's presence, for example, through verbal or physical cues like directly addressing them by breaking the fourth wall (Hartmann & Goldhoorn, 2011). Thus, the experiences of viewers who merely observe a media character on a screen would not fit the definition of PSIs, as they lack the interactional component (Hartmann et al., 2016). In the original definition, PSIs are conceptually differentiated from PSRs and are limited to viewers' illusional "give and take" with the media character (Horton & Wohl, 1956). This describes the audience members' illusion of being able to directly respond to the media character, or their feeling of being in a seemingly interaction (Hartmann, 2023).

Subsequent research on PSIs often relied on uses and gratifications theory and framed PSIs as gratifications of viewers' need for companionship or social interactions (Rubin et al., 1985). The PSI Scale was developed within this research context, in which Rubin et al. (1985) differentiated their concept of PSI from that of Horton and Wohl by including viewers' broader social involvement with a media character in the notion of PSI. In Rubin et al.'s (1985) view, PSI encompasses viewers' "interaction, identification, and long-term identification" (p. 156), showing a big derivation from the initial conceptualization of PSI by Horton and Wohl (1956). As a result, the PSI Scale was later proven to measure a phenomenon similar to that of the mediated friendship described by the concept of PSR (Dibble et al., 2016). Scholars in the parasocial research community often differentiate between PSI and PSR while addressing the problematic use of the PSI Scale (Dibble et al.,

2023). Nevertheless, because the PSI Scale is a widely applied measurement and research from other fields also includes PSEs, the scale is still often used, and the assessed concept is mistakenly labeled as PSI (Liebers & Schramm, 2023). When reviewing studies that claim to analyze PSI, it is essential to confirm the authors' descriptions of theoretical concepts and instruments used to establish whether they have measured PSI or if they have measured PSR using Rubin et al.'s (1985) PSI Scale.

Later, PSIs came to encompass the idea of viewers' experiences of PSIs. Here, PSIs were compared to social interactions to better understand viewers' feelings about being in an interaction with a media character (Hartmann & Goldhoorn, 2011). PSIs are characterized as the immediate reactions of viewers that result in a natural response to the media character (Horton & Strauss, 1957). In other words, Hartmann and Goldhoorn (2011) understand PSI as a combination of mutual awareness, attention, and adjustment. According to this definition, the viewer senses the presence of a media character and feels like the media character also senses the viewer's presence, which results in mutual awareness. Viewers might go even further and, beyond thinking that the media character is aware of and paying attention to them, respond to the media character, and perceive the character's behavior as a response to their own. Media characters can enhance how viewers experience PSIs, for example, by bodily and verbally addressing their audience (Hartmann & Goldhoorn, 2011). As suggested in an earlier example, a news presenter looking directly into the camera and wishing the audience a good evening may increase viewers' PSIs if they experience the illusion that the news presenter is speaking directly to them. Some might react verbally (e.g., wishing the news presenter a good evening) or nonverbally (e.g., nodding in approval). In this model, viewers' experiences of PSIs are limited to their illusion of being in an interaction with the media character, while media characters have several means of increasing viewers' PSIs.

In current PSI research, new questions have emerged in response to a rapidly changing media environment and ongoing technological developments. The original definition of PSI relied on the one-sided nature of the interaction between viewers and media characters, such as when viewers watching the news greeted the news presenter every evening (Horton & Wohl, 1956). Nowadays, with influencers on social media platforms reaching a wide audience, media characters or personas can also react to or interact with their audiences personally. Hartmann (2023) labeled this process the “interactivity problem” (p. 59). Suppose, for example, an Instagram influencer answers a question asked by a follower in a Reel, or a YouTube influencer reacts to a comment below a published video. When viewers interact parasocially with influencers during the consumption of social media, does this still meet the original criteria of PSI, even though the one-sidedness is variable? This “interactivity-problem” requires that PSI be further differentiated from mediated social interactions and necessitates studies of PSI in mediated settings (Hartmann, 2023). Thus, especially in the interactive context of the current media environment such as on social media, the viewers’ illusion of being in an interaction with a media character continues to be central to current and future PSI research.

Figure 1 represents the graphical representation of PSIs for the conceptual model of PSEs of this dissertation. The model shows that, for PSIs to take place, the audience members need to be exposed to media content with a media character on the screen. As PSI is anchored to viewers’ illusion of being in an interaction, the media character needs to be present on the screen for audience members to experience such an interaction. The dotted lines and the highlighted grey background represent the temporal framework within which PSIs can take place, limited through the media character’s presence in the media content. However, audience members do not have to experience PSIs during all this time, it is just the limit within PSIs

could take place. This is represented by different examples of PSIs taking place during these three examples of possible media exposure settings.

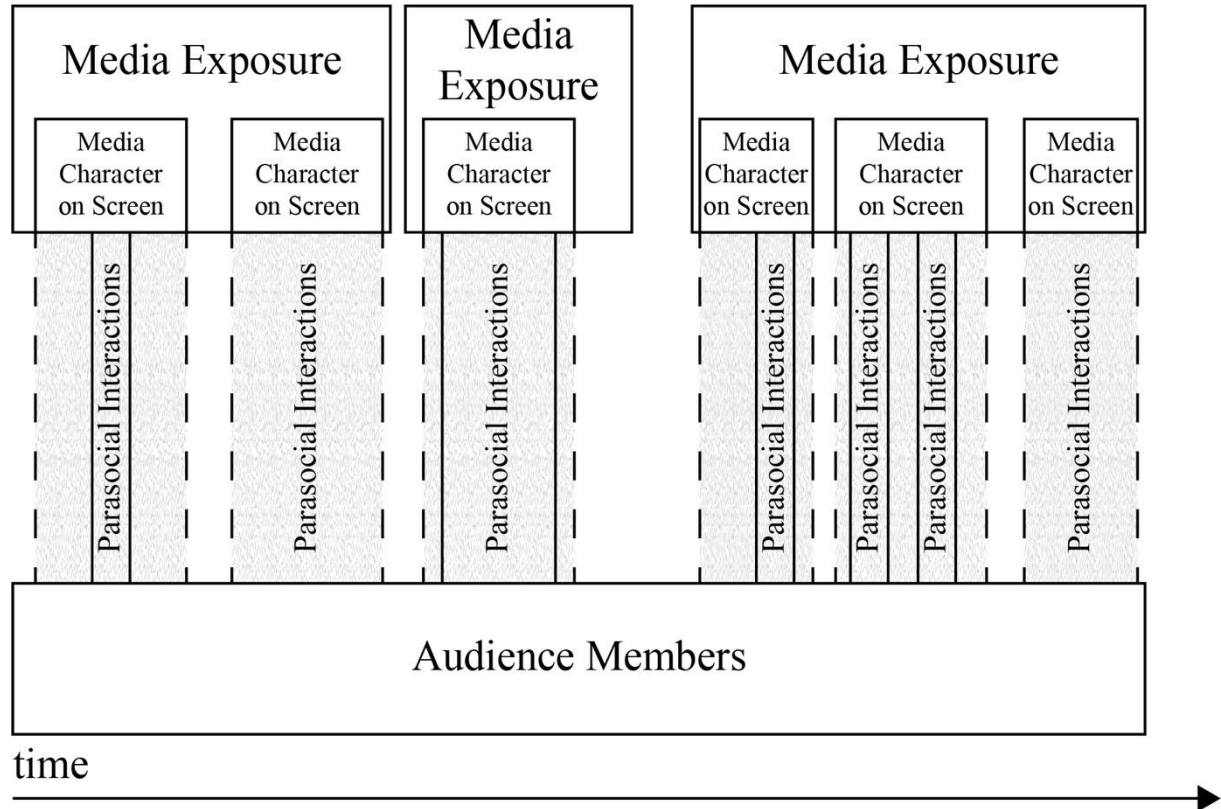


Figure 1: The conceptual representation of parasocial interactions (own visualization).

2.2 Parasocial Relationships with Media Characters

PSRs are the enduring bonds that viewers develop with media characters (Rubin et al., 1985), and they consist of viewers' general emotional and cognitive involvement with those characters. When viewers have strong PSRs with a media character, they may perceive the media character as a sort of friend who belongs to their real social circle (Klimmt et al., 2006), thinking about the character similar to how they think about real friends or trusting the character in times of need as emotional support (Tukachinsky, 2011). Such PSRs may evolve beyond mere instances of media exposure and develop into long-term socioemotional involvement (Stever, 2017; Tukachinsky et al., 2020). In this scenario, the viewer might think

about the character's future or how the character would respond to a real-world scenario in which the viewer finds themselves. Simply put, PSR describes a viewer's long-term feelings of connection with a media character (Tukachinsky et al., 2020).

Regarding how PSRs function, researchers often compare PSRs to their real-life social relationships. For some viewers, PSRs serve important companionship and personal identity functions (Giles, 2002; Schmid & Klimmt, 2011), and some researchers have described PSRs as “mimics of real-life social relationships” (Bond, 2018, p. 458). Characteristics that are important in social relationships also play an important role in PSRs, including viewers' attachment styles (e.g., Cole & Leets, 1999; Stever, 2017), social compensation (e.g., Madison et al., 2016; Rosaen & Dibble, 2016), or need to belong (e.g., Aw & Labrecque, 2020; MacNeill & DiTommaso, 2023). Building on a psychological model of relationship development in personal relationships (Knapp, 1978; Knapp et al., 2014), Tukachinsky and Stever (2019) described a theory of PSR development in a similar way by in which they emphasize the need to conceptualize and analyze PSRs as “a dynamic process rather than intensity of a monolithic experience” (Tukachinsky & Stever, 2019, p. 297). They define qualitatively different stages of PSRs, ranging from initiation and experimentation to intensification and integration (Tukachinsky & Stever, 2019). However, more empirical evaluations of the PSR development model are required to test its validity and assess its implications for PSR research. Overall, research on PSR has thus far attempted to analyze viewers' mediated encounters with media characters, often by applying theories pertaining to social relationships.

Conceptually, PSRs must be differentiated from PSIs (e.g., Giles, 2023; Liebers & Schramm, 2023). In part, their differences originate in the cited definitions and explanations of PSIs (see 2.1) and PSRs (see 2.2) summarized in Table 2. Both concepts share similarities: both are rooted in Horton and Wohl's foundational research on PSIs and relationships (Horton

& Wohl, 1956); both are often approached using psychological theories, with definitions of PSI and PSR drawing from theories of interpersonal interactions and relationships, respectively (Hartmann & Goldhoorn, 2011; Tukachinsky & Stever, 2019). However, PSIs and PSRs also have important differences. First, the concept of PSI encompasses only the viewer's illusions of being in an interaction with a media character during immediate media exposure (Hartmann & Goldhoorn, 2011); thus, all other possible processes between viewers and media characters during media exposure are excluded from the concept (Hartmann, 2023). In contrast, PSRs describe viewers' affective psychological involvement with a media character, which can develop beyond immediate media exposure (Tukachinsky & Stever, 2019). These differences in focus and process are also reflected in the example measurements in the table. Additionally, PSIs can be triggered explicitly through verbal or bodily addressing of a media character (Dibble et al., 2016; Hartmann & Goldhoorn, 2011), while possible influence factors on PSRs are traits of media characters (i.e., attraction, credibility) or the audience members (i.e., gender, attachment style; (Tukachinsky et al., 2020; Tukachinsky & Tokunaga, 2013). Considering these distinctions, and despite the similarities, from a conceptual perspective, PSIs and PSRs can be clearly differentiated.

Table 2.
Characteristics of parasocial interactions and parasocial relationships.

	parasocial interactions	parasocial relationships
main focus	illusion of being in an interaction	illusion of a long-term relationship
media exposure	limited to the exposure situation	development beyond exposure
possible triggers	direct verbal/bodily addressing of media character	traits of media characters such as attraction or credibility traits of audience members such as attachment style, age, gender
example measurement item	“While watching the clip, I had the feeling that X was aware of me”. (Hartmann & Goldhoorn, 2011)	“I think X could be a friend of mine” (Tukachinsky, 2011)
theoretical roots	psychology, interpersonal interactions	psychology, interpersonal relationships

Note: Based on Giles (2023), Hartmann and Goldhoorn (2011), Horton and Wohl (1956), and Tukachinsky and Stever (2019).

When distinguishing between PSIs and PSRs, it is also important to consider the relationship between both concepts. In parasocial research, this relationship has been characterized in several ways. One approach is Tukachinsky and Sangalang’s (2016) framing of PSIs and PSRs as orthogonal constructs that, when compared to social interactions, apply to the relationships between viewers and media characters. During an instance of media exposure, viewers can interact with someone with whom they do not have a relationship; at the same time, viewers might have a strong relationship with a media character with whom they do not interact during a particular immediate media exposure (Tukachinsky & Sangalang, 2016). Another perspective is that PSI and PSR are strongly correlated, and that repeated PSIs should result in PSRs over time (Gleich, 1996; Klimmt et al., 2006). Recent

research has shown that PSIs are not a necessary condition for viewers to develop PSRs; however, PSIs have been shown to increase viewers' sense of reciprocity, which then advances viewers' feelings of friendship with the media character (Hall, 2019). A meta-analysis of the differences and similarities between PSIs and PSRs concluded that both concepts "are related [...] but they are not redundant" (Tukachinsky et al., 2020, p. 20). These different perspectives on the relationship between PSIs and PSRs underline that more research is needed to better elaborate on the relationship between the two concepts, especially in the long-term perspective.

Again, the definitions and representation of PSR is graphically displayed in Figure 2. Technically, PSRs can start with the first appearance of a media character on the screen as displayed with the second example of PSR in the figure. However, they can also develop gradually at a later stage, such as the first example of PSR in the figure. They outlast immediate media exposures and can develop over a longer time also without media exposure to said

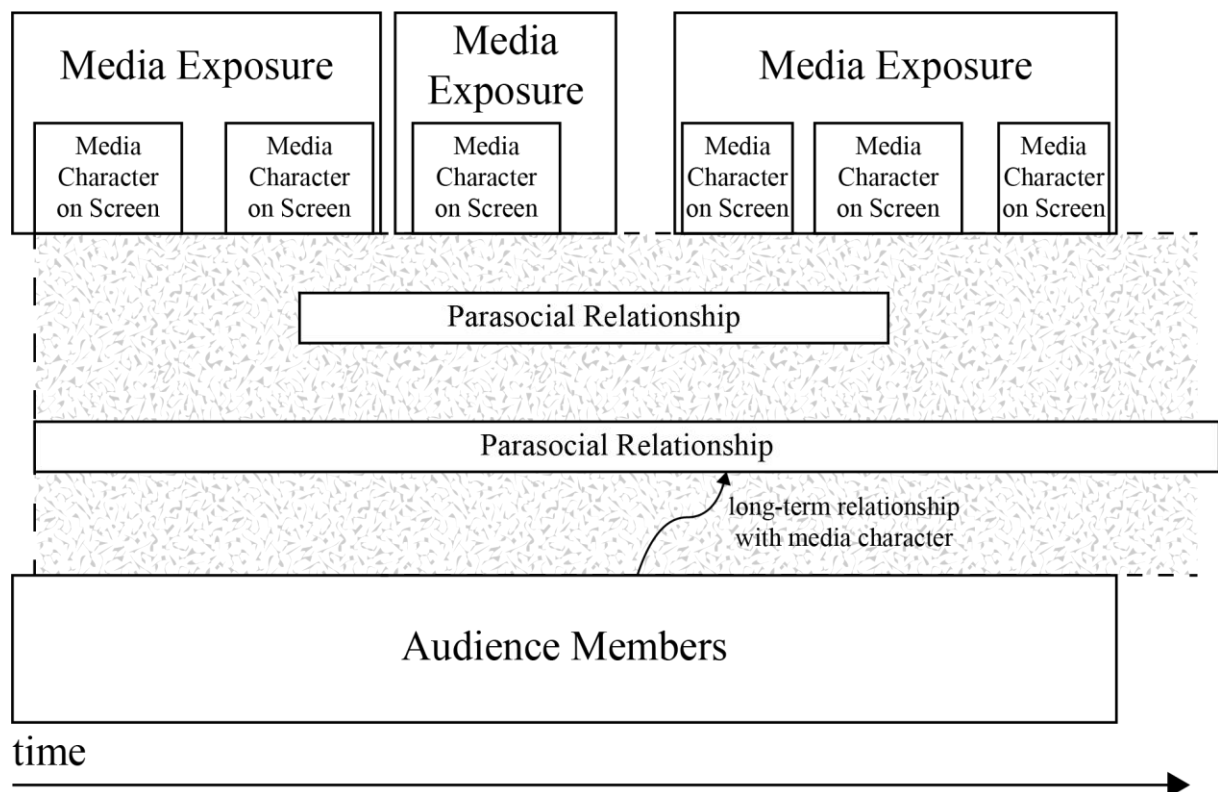


Figure 2: The conceptual framework of parasocial relationships (own visualization).

character. This is represented by the dotted line without a vertical ending line, and the grey background also continuing after the last media exposure to the media character. Within this marked timeframe, generally, PSRs can take place. However, within this framework, it is also possible that PSRs end even though the media exposure with the media character continues. This end of PSRs is, thus, described further in the next subchapter with the main focus on the concept of PSB.

2.3 *Parasocial Breakups with Media Characters*

Like genuine social relationships, PSRs can be dissolved, and the concept of PSB has been introduced to describe the end of a PSR (J. Cohen, 2003). There are several possible reasons for PSBs: a show ends, a character leaves the show, a viewer decides to stop watching the show, the character's actor may change, or the actor may die. These and similar scenarios result in some sort of PSB, whether instigated by the show, the actor, or the viewer (Hu, 2023). A comparison of PSBs and real-life breakups demonstrated that viewers feel emotions similar to those they would in response to a social breakup (J. Cohen, 2004). By extending research on social relationships, researchers have examined the effects of PSBs on viewers' emotions, cognitions, and behaviors (Hu, 2023). The findings include that PSBs may trigger emotional reactions similar to those involved in the dissolution of a social friendship (anger, sadness, or loneliness; J. Cohen, 2004) and that viewers may engage in other media tasks during the PSB, such as watching movies, reruns of the show in question on TV, or spending time on the internet unrelated to the show (Lather & Moyer-Guse, 2011). These studies suggest that viewers react to the end of a PSR with a wide range of cognitive, affective, and behavioral responses.

Parasocial research distinguishes between two types of PSBs: *definite* and *temporary*. A definite PSB describes a breakup between audience members and a media character that is final (J. Cohen, 2004). These occur when, for example, a show ends, a character is written off the

show, or an actor leaves a show (J. Cohen, 2004; Eyal & Cohen, 2006). After definite PSBs, viewers no longer engage with the character through new content within the same setting. For example, after the final episode of *Friends* aired in 2004 and it was clear that no further content featuring the *Friends* characters would be produced, viewers experienced definite PSBs (Eyal & Cohen, 2006). In contrast, *temporary* breakups occur when no new episodes are released for a period of time, but viewers know that the character will eventually return to the screen. This type of breakup was first conceptualized during a writers' strike when viewers expressed emotional suffering due to being separated from certain characters even though they knew the characters would return (Lather & Moyer-Guse, 2011). These temporary PSBs are prevalent in the current media environment, where, for example, streaming platforms release entire seasons of a show all at once. After watching the season within a short timeframe (i.e., binge-watching), viewers must endure long but temporary PSBs until new content is released. That such significant effects are evident in PSBs underscores the importance of PSRs to viewers' media consumption.

PSBs are closely related to the strength of PSRs, and viewers who have strong PSRs with a media character often feel more distressed after a PSB than viewers who have weaker PSRs. This positive relationship between PSR strength and PSB distress was shown consistently across several PSB research applications, including definite (Eyal & Cohen, 2006) and temporary PSBs (Lather & Moyer-Guse, 2011); PSBs forced upon the viewer (e.g., a show ending; Ellithorpe & Brookes, 2018; Eyal & Cohen, 2006) or initiated by the viewer (e.g., due to a transgression; Hu, 2016; Hu et al., 2018); and PSBs involving fictional media characters (e.g., Bond & Calvert, 2014; Ellithorpe & Brookes, 2018; Eyal & Cohen, 2006) and nonfictional media personalities (e.g., Bingaman, 2022; Gregg, 2018; Siegenthaler et al., 2021). Thus, viewers who experience a strong PSR with a media character generally also

suffer more when this relationship ends. These strong reactions to the dissolution of PSRs underline the importance of considering also the end of PSRs with the analysis of PSBs.

Due to viewers' PSRs with various media characters and current media use habits, PSBs are common. The conceptual framework of PSR is adapted to include PSBs in the graphical representation of Figure 3: The conceptual representation of parasocial breakups. In this example, after the last appearance of the media character, the audience members experience a PSB that is localized at the end of the previously existing PSR with this media character. The PSB itself describes only one short-term moment with the dissolution of the PSR, displayed with the vertical placement of PSB in contrast to the horizontal and long-term oriented placement of PSR. Despite the prevalence of PSRs and also PSBs in people's everyday media use, studies on PSBs comprise only about 7% of parasocial research (Schramm et al., 2022).

In Figure 3, the two types of PSBs are integrated in the conceptual representation model. The model for PSRs is supplemented with the PSBs marking the dissolution of the two examples for PSRs. In the first example, a temporary PSB is represented where the PSR is temporarily dissolved, and taken up again after the temporary PSB. In the second example, the PSR is dissolved after the end of the media exposure with media character, representing a definite PSB. Of course, there are more possible scenarios of when PSBs happen, and it is important to consider the reasons for the PSB when analyzing them (Lather & Moyer-Guse, 2011). The breakup itself refers to a short timeframe, marked with the vertical positioning of PSB. However, the PSB distress resulting from such a breakup can last beyond.

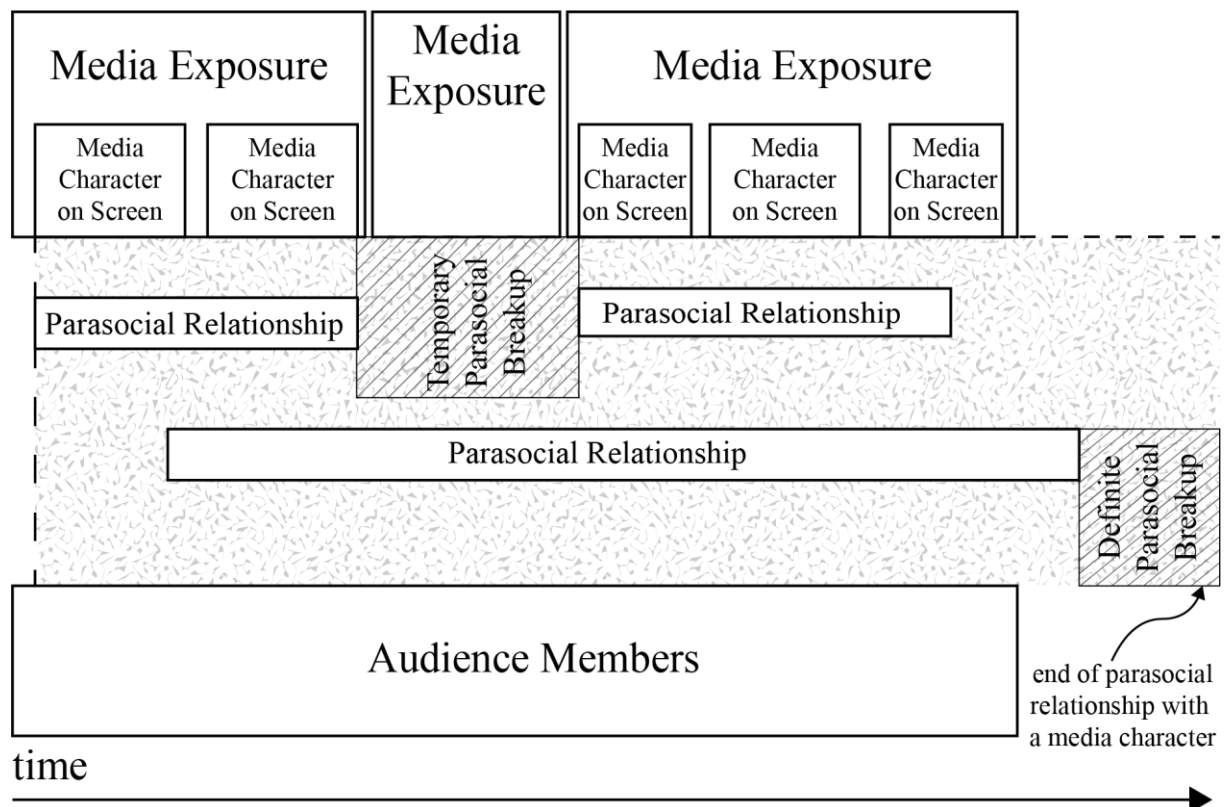


Figure 3: The conceptual representation of parasocial breakups (own visualization).

2.4 Parasocial Processing of Media Characters

Some scholars approach PSI differently and understand PSI in terms of PSP (e.g., Klimmt et al., 2006; Schramm & Hartmann, 2008). Schramm and Hartmann (2008b) defined PSI as “parasocial processing” (p. 387) and did not limit PSI to viewers’ mere feelings of being in a social interaction with the media character; rather, according to the authors, PSP encompasses viewers’ broader psychological involvement with a media character and describes “the degree to which the individual interacts psychologically with a media character” (Schramm & Hartmann, 2008, p. 388). PSP thus comprises the cognitive, affective, and conative processing of a mediated encounter (Schramm & Hartmann, 2008). From this perspective, PSP focuses more broadly on viewers’ observations of a media character and viewers’ associated experiences during this observation (Hartmann, 2023). PSP consists of,

for example, automatic perception processes, such as analyzing the media character, following the character's behavior, or thinking about the media character, but also more complex reactions, such as anticipating the media character's future, comparing the media character's behavior to their behavior, or reacting with mimics or gestures to the media character (Schramm & Hartmann, 2008). In this perspective, viewers' PSEs during media exposure are expanded beyond Horton and Wohl's (1956) original limitation to PSIs as illusion of interaction to the broader PSP.

PSP is a multidimensional concept that consists of audience members' general involvement with a media character during media exposure that can be reflected in cognitive, affective, and conative PSP (Schramm & Hartmann, 2008). Thereby, PSP encompasses several psychological processes related to media characters that range from their perception to the elaborated processing of their behaviors or thoughts (Hartmann, 2008). *Cognitive* PSP builds on audience members concentrating their attention on a media character, but is not limited to such attention allocation (Klimmt et al., 2006). It subsumes audience members' attention toward a media character, their thinking and information processing of the media character (Hartmann et al., 2004). *Affective* PSP focuses on audience members' emotional reactions geared by the media character. This comprises audience members' adapting to the emotions of the media character in the sense of mood contagion or transfer of emotions that can happen rather automatic and spontaneous (Klimmt et al., 2006; Schramm & Hartmann, 2008). *Conative* PSP subsume audience members' behavioral reactions to a mediated encounter of a media character. They are anchored within a concrete media exposure situation and can be verbal (e.g., responding to the media character) non-verbal (e.g., gestures toward the media character) in nature (Klimmt et al., 2006; Schramm & Hartmann, 2008). Together, cognitive, affective, and conative PSP form the multidimensional concept of PSP.

PSP is an important concept that supplements PSIs and PSRs to fully encompass viewers' PSEs. As in social interactions and friendships, mediated encounters provide opportunities for processes beyond the sole experience of interaction (PSI) or friendship (PSR). Thus, PSP covers viewers' experiences of a mediated encounter in a broad way. Such additional experiences include realizing a person's existence without interacting with each other, a regular mediated encounter with an individual without the feeling of being friends, or just sympathizing with a mediated persona for a short moment without further thinking about the mediated encounter. PSP accounts for the possibility that all of these processes take place during viewers' exposure to the media character (Klimmt et al., 2006; Schramm & Hartmann, 2008). Hence, the analysis of PSP can further add to the existing knowledge about viewers' psychological processing of media characters by applying a broad perspective and covering all viewers' cognitive, affective, and behavioral responses to mediated encounters.

Effectively investigating PSP requires that it be differentiated from PSIs and PSRs (see Table 3). PSP goes beyond the interactional component of PSI and covers all viewers' psychological involvement with the media character during the immediate media exposure to the character (Klimmt et al., 2006). Like PSI, PSP occurs only during an instance of media exposure and does not develop further beyond this instance (Schramm & Hartmann, 2008). PSP captures mediated encounters with and any processes related to perceiving characters, whereas PSI refers only to interactional processes. Furthermore, while PSP can occur in any social situation, PSI occurs only in interactive social situations (Hartmann, 2008). Thus, PSIs define the processing viewers undergo *during* their interactions with a media character, and PSR describes viewers' affective processing, while PSP broadly describes the combined cognitive, affective, and behavioral processing that takes place during mediated encounters (Schramm & Hartmann, 2008). The breadth of PSP is reflected in the measurement examples given in Table 3, in which one example item is provided to illustrate each of the three PSP

dimensions. Compared to PSIs and PSRs, PSP is assumed to set in “immediately and rather automatically once a persona is encountered (Schramm & Hartmann, 2008, p. 388).” Thus, the main trigger for PSP is the presence of a media character in media content. However, also traits of media characters, audience members, and the media exposure situation itself might influence audience members’ PSP. For example, their PSP might decrease when there are other activities taking place that distract audience members’ focus on the media content (Klimmt et al., 2006).

Table 3.
Characteristics of parasocial interactions, parasocial relationships, and parasocial processing.

	parasocial interactions	parasocial relationships	parasocial processing
main focus	illusion of being in an interaction	illusion of a long-term relationship	broad psychological involvement with media character
media exposure	limited to the exposure situation	development beyond exposure	limited to the exposure situation
possible triggers	direct verbal/bodily addressing of media character	traits of media characters such as attraction or credibility traits of audience members such as attachment style, age, gender	appearance of media character in media content (e.g., on screen) traits of media characters, audience members, and the media exposure situation
example measurement item	“While watching the clip, I had the feeling that X was aware of me”. (Hartmann & Goldhoorn, 2011)	“I think X could be a friend of mine” (Tukachinsky, 2011)	“I carefully followed the behavior of X” (cognitive) “I found X to be likeable” (affective) “I sometimes gestured towards X” (behavioral) (Schramm & Hartmann, 2008)
theoretical roots	psychology, interpersonal interactions	psychology, interpersonal relationships	social psychology, media psychology, communication

Note: Based on D. Giles (2023), Hartmann (2008), Hartmann and Goldhoorn (2011), Horton and Wohl (1956); Klimmt et al. (2006), Schramm & Hartmann (2008b), and Tukachinsky and Stever (2019).

After defining and differentiating PSP from other forms of PSEs, the concept is graphically represented in Figure 4 as basis of the conceptual framework of this dissertation. Again, dotted lines and grey areas represent the time within which PSP can happen. However, viewers must not engage in PSP during all this time. Viewers' PSP is limited to immediate media exposure. PSP refers to the cognitive, affective, and behavioral processing that occurs during a viewers' psychological involvement with media characters. Thereby, not all three forms of PSP have to happen simultaneously. Cognitive, affective, and conative PSP are not mutually dependent. However, often they do not occur in isolation from one another (Schramm & Hartmann, 2008). Generally, PSP as a separate concept is less prevalent in existing research; thus, analyzing viewer PSP in the context of mediated encounters expands the existing research on viewers' PSEs.

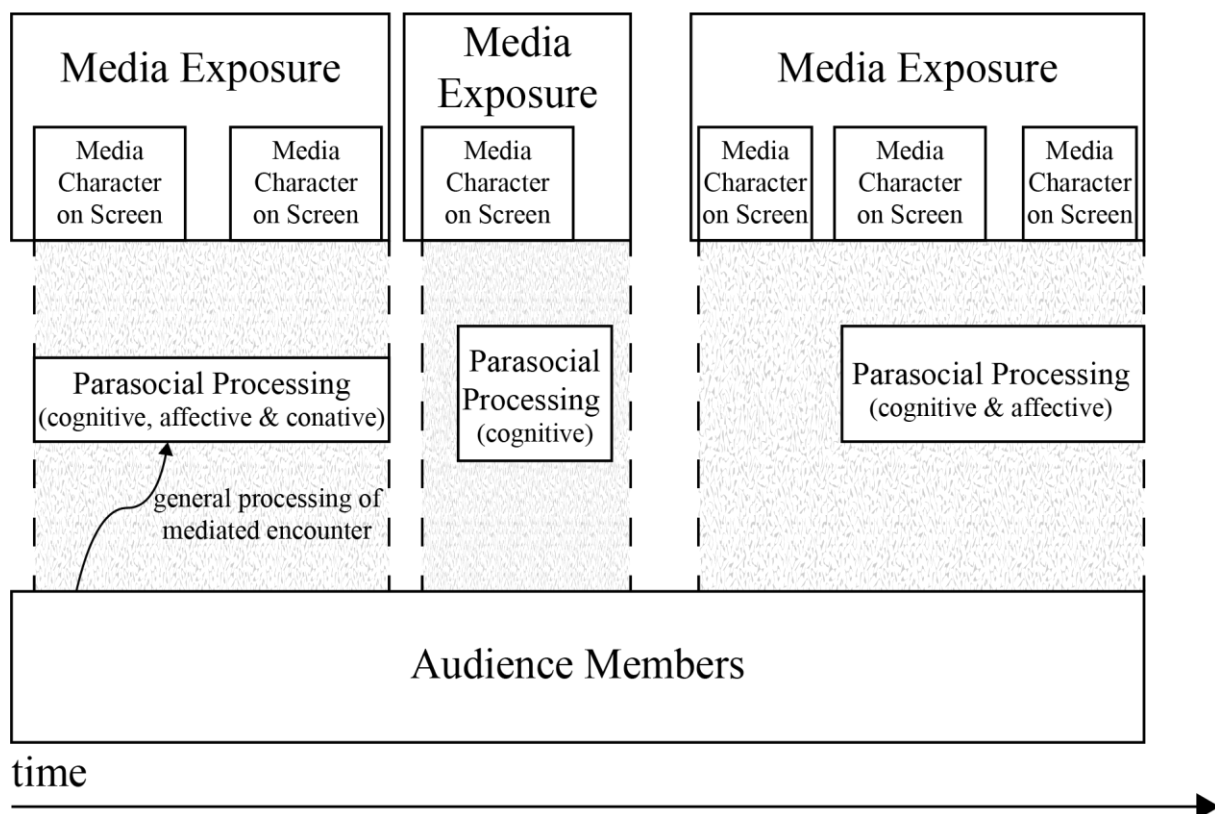


Figure 4: The conceptual representation of parasocial processing (own visualization).

2.5 *A Conceptual Model of Parasocial Experiences*

The concepts of PSI, PSR, PSP, and PSB form the theoretical background of this dissertation. Parasocial research does not have one overarching theoretical model that connects all the phenomena analyzed in this research realm. There are indeed several theoretical models that focus on one of the parasocial concepts. For example, the two-level model describes the different intensities of PSP and is based on which processes they are triggered (Hartmann et al., 2004; Klimmt et al., 2006). The PSR stage model describes different possible stages of PSB from a theoretical perspective (Tukachinsky & Stever, 2019). Another approach that a lot of parasocial research takes is comparing parasocial and social interactions or parasocial and social relationships (e.g., Auter & Palmgreen, 2000; Hartmann, 2008; Phua, 2016). However, none of these models or theories relates the parasocial concepts to each other or embeds them in general media use and media effects theories. Overall, the link in parasocial research is the concepts that are analyzed. Therefore, as the theoretical framework for this dissertation, a conceptual model of these parasocial concepts summarizes these concepts (Figure 5).

The conceptual model as the framework of the dissertation is based on the definitions and literature presented in the previous subsections. In addition, the delimitations of the various concepts, which are compared in Table 3, are also considered. The conceptual model aims to integrate the multiple concepts of parasocial research into a common model, considering their different backgrounds and definitions. The model summarizes the individual graphical representations that have already been introduced step by step. It presents visually the different definitions and concepts that form the theoretical background of this dissertation. The goal of this conceptual model of PSEs is that the differentiations between the different concepts focusing on one aspect of PSEs and their commonalities are visually represented. When analyzing PSEs, it is important to consider which part of this conceptual model is crucial and which types of PSEs are relevant to consider in the analyzed media environment. Thereby, the

conceptual model visually summarizes the definitions, differentiations, and commonalities between the concepts of PSI, PSP, PSR, and PSB that together form the parasocial phenomena labeled as PSEs. The presentation is initially simplified and focuses on the various parasocial concepts. Several relevant factors for PSEs are depicted as an aggregate, e.g., media exposure or audience members.

For all these types of PSEs to take place, audience members need to be exposed to media content with media characters, which is represented by the boxes on the top and the bottom of the conceptual model. This initial presentation shows that other factors, e.g., characteristics of the media character or situational factors of media exposure, can also be relevant in the analysis of PSEs. However, they are not explicitly presented to classify the model as a basic model that offers adaptations for each specific research question or study goal. Then, PSIs and PSBs are presented as vertical fields, representing a more short-term perspective on PSEs. PSIs are limited through the time the media character appears in the media content, and PSBs only describe the end of a PSR, which is also a relatively short time frame. In contrast, PSP and PSR are presented horizontally. PSPs, however, are still relatively short-term compared to PSRs, as they are limited through immediate media exposure. PSRs, in contrast, are not limited to immediate media exposure and can develop beyond. Their end, described as PSB, can result from several reasons and is not necessarily connected to the end of media exposure of this character. Overall, the conceptual model summarizes the theoretically derived definitions of PSE concepts and depicts them as visual representations.

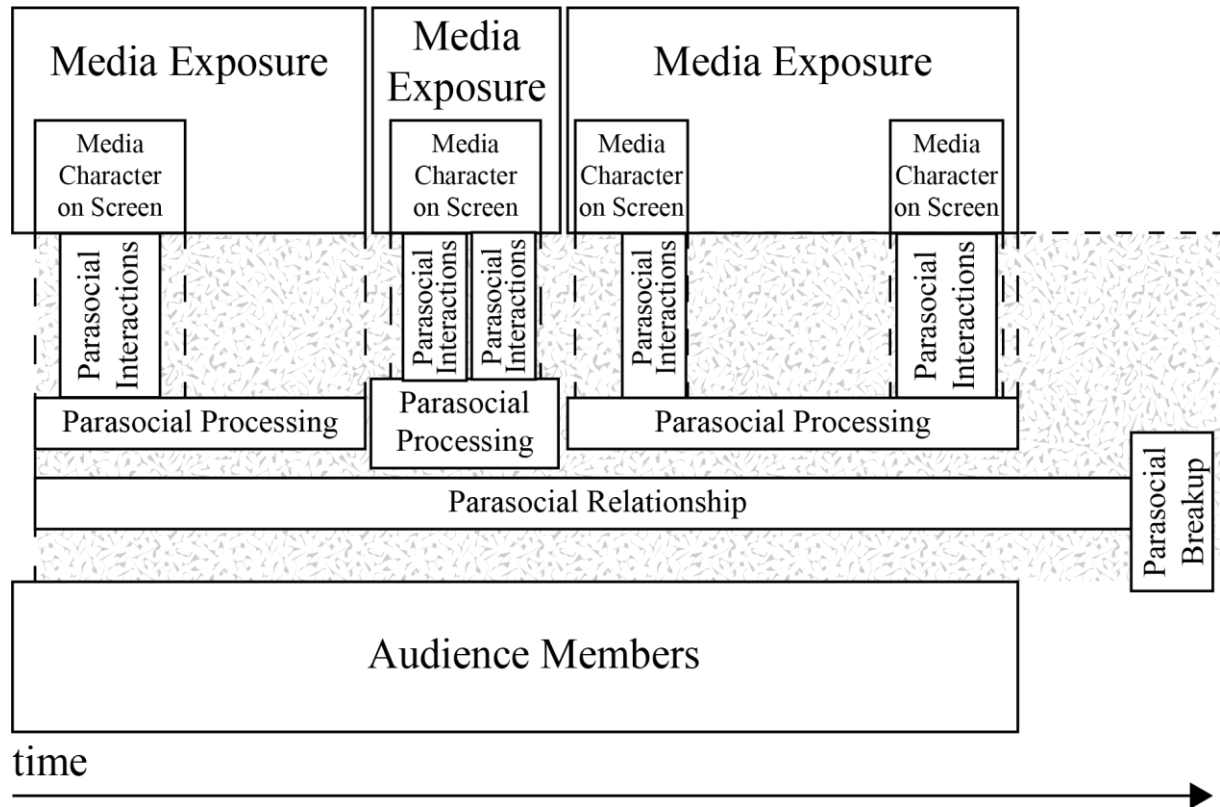


Figure 5: The conceptual model of parasocial experiences (own visualization).

3 Existing Research (and Research Gaps) in Parasocial Research

The research about PSEs constitutes one of the most researched topics within the field of communication studies (Giles, 2002; Schramm et al., 2022). The academic interest in PSEs goes beyond communication scholars, and PSEs are analyzed in different domains such as in marketing, tourism, economics, health, psychology, and political research. In media and communication research, the analysis of PSEs is diverse. Some research focuses on PSEs as gratification for their media use. For example, PSEs were shown to be gratifications for people with the need for social interaction. Other research analyzes on PSEs as effect of media use. PSEs, for example, were shown to result from extensive media use such as binge-watching (Anghelcev et al., 2021; Ferchaud et al., 2022; Tukachinsky & Eyal, 2018). Another line of research analyzes the influence of PSEs on further media processing. For example, PSEs were shown to influence people's enjoyment (e.g., Schluetz et al., 2020; Tukachinsky & Stever,

2019), persuasive effects in the form of behavioral intentions such as following public service ads' health advice (Phua, 2016; e.g., Rosaen et al., 2019) or buying things that are advertised on social media (Jin & Ryu, 2020; Sokolova & Kefi, 2020), and peoples' stereotypical perceptions of certain groups (Schiappa et al., 2006; Wong et al., 2017). Thus, the research on PSEs is diverse and manifold, and the role of PSEs examined in various contexts.

In PSE research, generally, different factors are considered in the context of PSEs. First, PSEs is the umbrella term, and encompasses the concepts of PSIs, PSRs, PSP, and PSBs. All types of PSEs are always anchored in some sort of media exposure, which can only happen when an audience member consumes some sort of media content with a media character present. For example, a person reads a story about a protagonist that experiences certain adventures, or a person walks by an advertisement displaying a media personality consuming food from a specific brand. Thereby, the media character is embedded in the media content, which, in turn, is embedded in the media environment. The media environment comprises factors such as the type of media or the media outlet, for example, streaming platforms or social media. These types of media and their specific characteristics are important to consider in PSE research, as they potentially influence the way audience members experience the media exposure situation. Overall, Figure 6 summarizes these different concepts generally relevant in PSE research.

The first prerequisite for PSEs are audience members who are somewhat exposed to media characters, embedded in media content and their media environment. Within this media exposure, different types of PSEs can take place with PSIs, PSRs, PSBs, and PSP. The vertical representation of PSIs, PSP, and PSB shows that they are more short-lived than the long-term oriented PSRs. PSIs and PSPs are limited to media exposure, PSI even to the media exposure with the media character. Thereby, there is a certain overlap between PSIs and PSPs, as both concepts focus on some conative processing, for example, on reactions of audience members

to the media characters such as responding to them. PSRs also overlap with PSIs, as PSIs during media exposure can increase the probability of PSRs, even though they are not a prerequisite for PSRs. PSP overlaps with PSRs, as both concepts focus on audience members' affective responses towards a media character. PSB marks the end of PSRs, and is strongly influenced by the strength of PSRs, thus the overlap of both concepts. As PSB describe mostly affective processing of media characters, it slightly overlaps with PSP. Overall, Figure 6 summarizes the definitions and differentiations of Chapter 2, and additionally embeds these PSEs into the media exposure situation. This consideration of the media exposure situation and the media environment is highly relevant for audience member PSEs, which is represented in the plethora of PSE research that focuses on different aspects that can be categorized into this model.

To give a more detailed overview of the multifaceted research on PSEs, the following subchapters review previous research on PSEs while respecting the media environment in which PSEs are analyzed. Due to the conceptual inconsistencies, inconsequent use of terms and the associated problems resulting from that – for example, lack of comparability or generalizability, interchangeable use of terms and measurements – this chapter gives a general overview of PSE research. Even though the concepts can be differentiated and describe different aspects of PSEs (see Chapter 2), the interchangeable use of terms especially for PSI and PSR resulted in a difficulty to compare existing PSE research. Thus, the following Chapter summarizes existing research under the umbrella term PSE, without differentiating for the concepts PSI, PSR, and PSP. When the specific concepts PSI, PSR, or PSB are mentioned, then the results or research gaps refer to this concept only. In Chapter 4, then, the resulting research gaps are discussed as background for the research goals of this dissertation's articles.

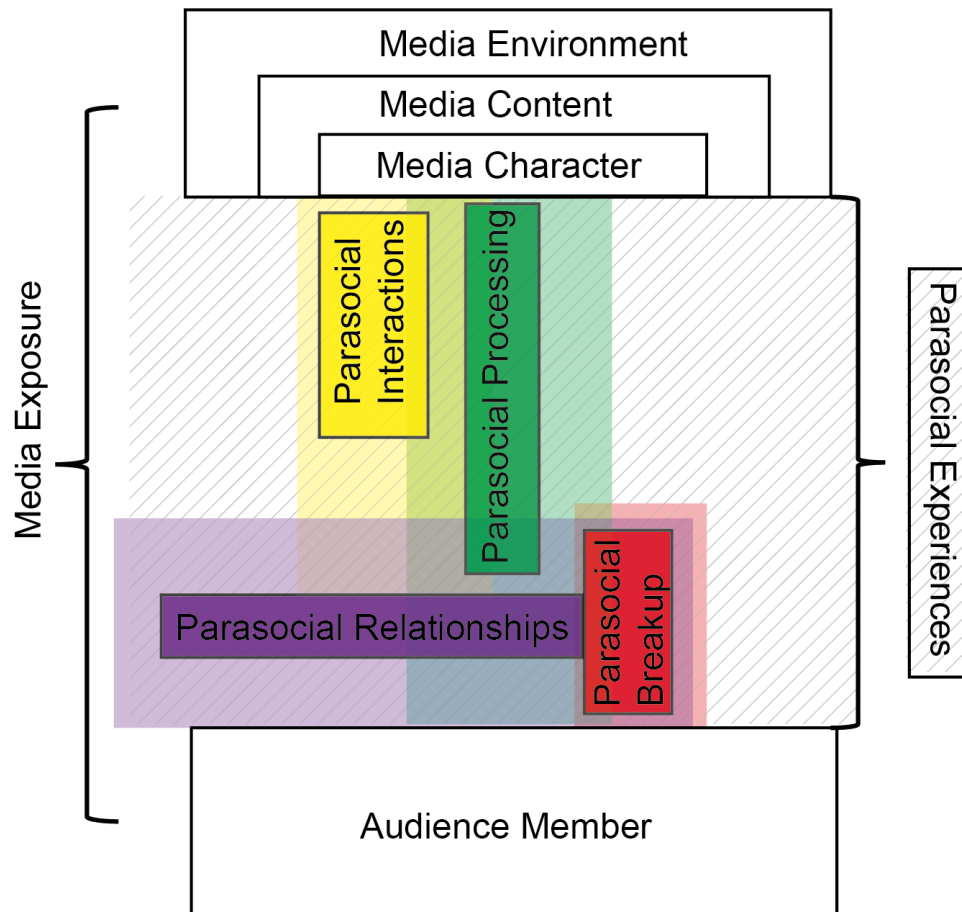


Figure 6: Parasocial experiences embedded in media exposure situations (own visualization).

3.1 Selection of Media Characters

In empirical PSE research, the existing studies can be categorized based on their inclusion of viewer-chosen media characters they analyzed. For the period from 2016 to 2020, Schramm and colleagues (2022) found that 44% of published PSE research analyzed viewers' PSEs with a specific media character, including nonfictional personalities, such as comedian Robin Williams (E. L. Cohen & Hoffner, 2016) and athlete LeBron James (Bostwick & Lookadoo, 2017), and fictional characters, such as Han Solo (*Star Wars*; Bonus et al., 2021) or Miranda (*Sex and the City*; So & Shen, 2016). In these studies, participants were recruited and asked to describe their PSEs with a media character preselected by the researchers. This approach found various PSE intensities, with some participants engaging strongly with the selected media character and others engaging weakly. In 32% of the studies reviewed by

Schramm and colleagues (2022), participants were asked to select a media character within constraints determined by the study design, such as characters from a specific show (J. Cohen & Hershman-Shitrit, 2017; Ellithorpe & Brookes, 2018; Hall, 2019) or specific media format, including, for instance, TV (Rosaen & Dibble, 2017; Slater et al., 2018) or YouTube (Rihl & Wegener, 2017; Tolbert & Drogos, 2019).

Another 8% of the analyzed studies from 2016 to 2020 preselected media characters and offered participants a list of choices from which they were permitted to choose one character on which to focus their responses related to PSEs (Schramm et al., 2022). In such studies, for example, participants were permitted to select one of several candidates from a specific TV show (Shin, 2016) or a musical group (Setyanto et al., 2017). These studies facilitated the comparison of PSEs within a selected setting, such as the media format or the show chosen as the focus of the study. In 11% of the studies published between 2016 and 2020, participants were permitted to choose a media character without any limitations on the show or film, media format, or character function (Schramm et al., 2022). These studies often possess high external validity because they include a diverse range of media characters that represent the variety of characters with whom viewers may choose to engage parasocially during their habitual media consumption. Such studies with no or less restrictions on media characters are far scarcer, and the findings of PSEs in this context limited. Therefore, two of the articles in this dissertation consider viewers' PSEs in the context of daily media use through field studies that do not restrict participants' choices of characters (Chapters 5.1 and 5.2).

3.2 Types of Media Characters and Media Outlets

Viewers can have PSEs with characters who appear in different media formats, ranging from books and TV to social media, and PSE research is interested in all of these areas. From 1956 to 2015, almost 50% of the studies investigating PSE focused on the film and TV context

(Liebers & Schramm, 2017). These studies focused on PSEs with nonfictional media personalities, such as newscasters (Levy, 1979; Perse, 1990; Rubin et al., 1985), or fictional media characters, such as Harry Potter (*Harry Potter*) and Elmo (*Sesame Street*; Nabi et al., 2006; Noble, 1983; Schmid & Klimmt, 2011). In recent years, nearly 40% of similar studies have focused on social media (Schramm et al., 2022); largely as the result of the increased amount of time that people spend engaging with social media (Dixon, 2023; Külling et al., 2022), researchers have demonstrated the most interest in viewer encounters with influencers on YouTube (Beautemps & Bresges, 2022; de Berail et al., 2019; Thelwall et al., 2022), Instagram (Blight et al., 2017; Jin & Ryu, 2020; Sokolova & Kefi, 2020), and TikTok (Akhtar & Islam, 2023; Flecha-Ortiz et al., 2023; Lawrence & Meivitanli, 2023).

Moreover, significant changes in the traditional media environment have led to the increased prominence of video streaming platforms in everyday media use habits (Jenner, 2014). Netflix now has approximately 250 million paid subscribers worldwide (Stoll, 2023), and in the USA, 83% of households subscribe to at least one streaming service platform, spending, on average, about three hours daily streaming media content (Duarte, 2023). According to Schramm and colleagues' (2022) overview of the literature, studies within this subcategory of film and TV, despite its widespread popularity, are scarce. Hence, as video streaming becomes more prevalent, so too does its research significance, and it is critical to consider viewers' PSEs with characters, as mediated through video streaming platforms, to keep pace with real-world media use habits.

Alongside a shift in the media formats on which parasocial studies have focused, the fictionality of media characters has also changed. Early research on PSEs focused on media personalities such as news presenters or TV hosts (e.g., Horton & Strauss, 1957; Horton & Wohl, 1956; Rubin et al., 1985). Then, the scope of PSEs was opened and also viewers' PSEs with non-fictional media characters were analyzed (e.g., Daniel & Westerman, 2017; DeGroot

& Leith, 2018; Schmid & Klimmt, 2011). From the parasocial studies published between 2016 and 2020, most of them tended to focus on nonfictional media personas (65%; Schramm et al., 2022). This may be the result of increased engagement with social media, through which users primarily follow and therefore have PSEs with nonfictional media personas, such as influencers (Flecha-Ortiz et al., 2023; Lou & Kim, 2019), athletes (Pan & Zeng, 2018), or musicians (Kurtin et al., 2019). Additionally, also in classic television viewers can have PSEs with newscasters (Sherman-Morris, 2005; Thallmair & Rössler, 2001) or TV hosts (Kline, 2005; Lim & Kim, 2011). Thus, the prevalence of non-fictional media personas resulted in many studies analyzing PSEs with them.

PSEs with fictional media characters are still relevant in individuals' media consumption. Viewers can also have PSEs with fictional media characters, for example, in film and TV series (J. Cohen & Hershman-Shitrit, 2017; Rosaen & Dibble, 2016; So & Shen, 2016). These fictional characters are essential for audience members. For example, when researchers ask study participants to choose their favorite media character, a majority selects fictional media characters (Tukachinsky, 2011). Further, their PSEs with such fictional characters were shown to be more intense than PSEs with a non-fictional media character (Hu, 2016). Fictional media characters seem to be attractive to audience members, especially to project their wishes and needs on them (Rosaen et al., 2011). As audience members tend to also accept fictional media characters as their social partners (Giles, 2002), the analysis of PSEs with fictional media characters remains important. In the context of audience members' nowadays self-directed media consumption on streaming platforms, fictional media characters are prevalent and easily accessible in peoples' everyday media use. However, few research concentrates on fictional media characters on streaming platforms in the context of PSE research. Thus, audience members' autonomy over their mediated encounters with fictional media characters needs to be considered in future PSE research.

Investigating viewers' PSEs with fictional characters in the context of video streaming platforms has the potential to halt the widening of this gap while reflecting current media use habits. This dissertation seeks to ameliorate this research gaps—media characters on streaming platforms—by investigating parasocial experiences with fictional media characters in the context of streaming media. This approach is implemented explicitly in three of the articles that constitute this dissertation: Article I (Chapter 5.1), Article II (Chapter 5.2), and Article III (Chapter 5.3).

3.3 Short vs. Long-Term Perspectives on Parasocial Experiences

PSEs are often analyzed in cross-sectional study designs that assess viewers' PSEs as static concepts. In particular, PSRs, conceptually described as developing and existing beyond media exposure, cannot be fully captured by such cross-sectional designs. Recently, Liebers and Schramm (2017) stressed the importance of long-term studies assessing viewers' PSEs. More recent research from 2016 to 2020 has assessed long-term PSEs and repeated media use, including various studies that have analyzed the relationship between binge-watching and PSEs (Anghelcev et al., 2021; Nanda & Banerjee, 2020; Tukachinsky & Eyal, 2018). However, these studies still rely on cross-sectional measurements and do not repeatedly assess PSEs to capture their development beyond immediate media exposure.

Two studies address this research gap consisting of the lack of longitudinal PSR studies by considering the development of viewers' PSEs over time. Bond (2021) analyzed viewers' PSEs with gay characters from various TV series. He studied the development of viewer PSR over 10 weeks, with the participants watching one episode per week. PSRs with outgroup characters increased strongly over time, and PSRs also resulted in less prejudices over time (Bond, 2021). Similarly, Siegenthaler and colleagues analyzed viewers' PSR and PSBs with reality TV contestants over time. The participants watched one new episode of the show each week, and their PSEs with one of two preselected candidates were monitored as

long as they were on the show. When these candidates left the show, the monitoring of their PSEs expanded to include PSB distress. The results showed no no increase in PSR strength over time (Siegenthaler et al., 2021). These first studies to analyze PSEs in the longer term constitute the initial steps toward addressing the research gap of lacking longitudinal studies to analyze PSR. However, partly theory-inconsistent results of Siegenthaler and colleagues (2021) with no PSR development over time challenge the theoretical assumptions. With only two studies using this perspective, no general assumptions can be drawn. This underlines the need for more studies that assess the development of PSEs in the long term.

This dissertation contributes to the efforts of scholars such as Bond (2021) and Siegenthaler et al. (2021) through articles that employ long-term study designs to analyze PSEs. The first two articles monitored viewers' PSEs with the media characters they encountered during engagement with streaming media over two weeks (Chapters 5.1 and 5.2). A third article assessed viewer PSR before and after the release of a new streaming series to analyze the development of PSEs with the same media character over time (Chapter 5.3).

3.4 Measuring Viewers' Parasocial Experiences

In addition to media character selection, additional methodological choices have created significant differences regarding the PSE's measurements in recent parasocial research. Most studies on PSEs rely on surveys (59%) and experimental designs (25%), and 74% of the studies employed an existing measurement or an adapted version of an existing measurement for assessment purposes. Using established and validated scales is meaningful, as it enhances the comparability of the findings obtained with these same measurements. However, when only adapted versions of existing measurements are applied, this comparability of findings is limited. Problematic is the use of unvalidated or insufficiently validated scales, as the validity of these measurements remain questionable.

In the context of parasocial research, several established scales persist (Dibble et al., 2023). The PSI Scale (Rubin et al., 1985) and the short version of the same scale (Rubin & Perse, 1987) are the most frequently used, followed by the PSI-Process Scales (Schramm & Hartmann, 2008), the Audience-Persona Interaction Scale (Auter & Palmgreen, 2000), the Celebrity-Persona Parasocial Interaction Scale (Bocarnea & Brown, 2007), the Experience of Parasocial Interaction Scale (EPSI; Hartmann & Goldhoorn, 2011), and the Parasocial Relationship Scale (Tukachinsky, 2011). On average, quantitative studies in this field have used 12 items to assess PSI and 13 items to assess PSR from the previously named scales (Schramm et al., 2022). Some of the mentioned measurements have been established in empirical studies despite a lack of scale validation (Dibble et al., 2023). Overall, two major research gaps exist that this dissertation aims to address.

First, the quantitative measurement of PSEs is manifold, which complicates the ability to compare findings. In particular, the PSI Scale, which actually measures PSR and not PSI, has created inconsistencies in parasocial research (Dibble et al., 2016). The extensive PSI-Process Scales contains more than 100 items and is seldom used in its entirety. Studies that use this scale often fail to justify or disclose item selection, which tends to vary between studies and damage comparability (Dibble et al., 2023). Currently, two scales have been validated for the assessment of viewer PSI and PSR: the EPSI Scale (PSI; Hartmann & Goldhoorn, 2011) and the PSR Scale (Tukachinsky, 2011). Based on theoretical principles, the scale structure of these instruments has been confirmed through factor analysis, and both scales have been validated in several studies. In contrast, to date, no instruments have been validated for the assessment of PSP.

Second, the average number of items used in existing studies suggests the need for an ecological measurement of viewers' PSEs in quantitative survey studies (Schramm et al., 2022). The EPSI Scale consists of six items (Hartmann & Goldhoorn, 2011), and the PSR Scale

includes 13 items (Tukachinsky, 2011). The PSI-Process Scales, which frames viewers' PSP as their broad psychological involvement with a media character during media use (Schramm & Hartmann, 2008), contains 112 items that assess cognitive, affective, and conative processes; its size limits its applicability, and the scale is rarely applied in its entirety. Researchers who use the PSI-Process Scales often use a selection of items most relevant to their understanding of PSP (Dibble et al., 2023). The field requires a short scale that assesses PSP efficiently (Dibble et al., 2023). Accordingly, the fourth article of the dissertation presents the development of an ecological, validated short scale to measure PSP, defined as viewers' broad psychological involvement with a media character during media exposure. Based on the PSI-Process Scales and the theoretical principles of belonging, a short scale is proposed, developed, and tested through factor analysis and three empirical studies in Article IV (Chapter 5.4).

4 Research Interests and Overarching Research Questions

The research overview in the previous chapter presents different perspectives and gaps in PSE research. To delve more deeply into these research areas and lay out the arguments for the dissertation articles, these PSE research areas are further elaborated upon in the following chapters. This chapter introduces the overarching research questions of each article and contextualizes them within the existing literature. Following this discussion of the research questions, **Fehler! Verweisquelle konnte nicht gefunden werden.** presents the research articles that comprise this dissertation.

4.1 Parasocial Experiences in Viewers' Everyday Viewing Situations

The first objective of this dissertation is to analyze PSEs by focusing on viewers' everyday media use and related PSEs. Many parasocial research studies rely on surveys or experimental studies to assess viewers' PSEs (Liebers & Schramm, 2023). While these study designs have several strengths, they also have drawbacks. First, in experimental studies, viewers are exposed to specific media characters and then asked about their PSEs (e.g.,

Hartmann & Goldhoorn, 2011; Hu et al., 2018; Stein et al., 2022). The advantage of experimental studies on PSEs is that single variables pertaining to the character (e.g., age and addressing style) or the viewing situation (e.g., with or without distraction, screen size, and device type) can be systematically manipulated, while all other factors are controlled. For example, a study might design one experimental condition in which the media character speaks directly to the viewer and one in which the media character does not (e.g., Hartmann & Goldhoorn, 2011; Oliver et al., 2019). The drawback of experimental studies is that they predetermine viewers' PSEs by creating scenarios in which only one character is present (e.g., Rosaen et al., 2019) or in which viewers have a limited choice of characters (e.g., Siegenthaler et al., 2021). In these cases, the variety of characters with which viewers interact in their everyday media use is not sufficiently represented.

Survey studies also tend to restrict viewers' character choices in some way. In these studies of PSE, the researchers often restrict the focal media character to a specific show (see Chapter 3.1), ask participants about a specific character, or ask them to name one media character from previously viewed media. Only after this selection is made does the assessment begin. Participant choices can result in long time lags between their consumption of the media content and the actual PSE measurement, for example, when asked about media content they watched long time ago. This introduces problems associated with possible memory changes, biases, or generalizations (Schwarz, 1999; Schwarz & Oyserman, 2001) that may influence participants' evaluations of their PSEs. This issue is especially relevant for studies interested in PSI and PSP, which are conceptually restricted to immediate media exposure. If participants are asked to name their favorite media character on YouTube before their PSI or PSP is assessed, it is unclear whether they are referring back to a specific concrete media exposure or answering questions based on more generic memories. Thus, the time lag

between media exposure and measurement can unintentionally influence the PSEs assessed in these kinds of studies.

In addition to surveys and experimental designs, field studies are another option for examining viewers' PSEs, which overcomes several of the abovementioned limitations. By observing viewers' daily media use without instructing or imposing restrictions on participant media use, and in the absence of the possible influences of an artificial laboratory setting, field studies facilitate the assessment of viewers' PSEs in a natural setting. In field studies, viewers are not limited to engaging with particular media characters. Within their daily media diet, they have the opportunity to engage with a wide variety of different media characters due to technological developments that have changed viewers' media use by making it possible to access various media characters anytime, anywhere, and for as long as they want through streaming platforms or social media (Jenner, 2014). Thus, viewers now have more autonomy over their PSEs than they did when linear TV was the only option, and broadcast schedules dictated media character availability and parasocial encounter duration. By providing high external validity and analyzing media use within individuals' everyday lives, field studies better reflect viewers' autonomy over their parasocial encounters and the diversity of available media characters with which to parasocially engage are represented. PSE field studies add to the better understanding of the PSE phenomena embedded within people's everyday lives.

Regarding the issue of time lag identified in survey studies, field studies can be augmented by experience sampling to overcome this limitation. In the context of field studies, experience sampling surveys can be triggered following each instance of media exposure to assess viewers' PSEs directly after media use. In these surveys, viewers can respond to questions about their mediated encounters with media characters, which in turn facilitates the assessment of their PSEs. These in situ measurements of viewers' PSEs support a stronger

operationalization of concepts such as PSI and PSP, which are conceptually anchored within a particular and immediate media exposure situation. To avoid repeating the methodological drawbacks of existing studies, the first two articles of this dissertation combine observational field studies with post-exposure experience sampling surveys that measure PSEs to analyze PSE concepts within people's everyday media use.

Specifically, these studies focused on viewers' PSEs with media characters as mediated through the use of the Netflix streaming platform. This focus on the streaming platform Netflix was necessary from a methodological perspective due to the technology applied, but it does not limit the research objectives, as engagement with streaming media is ubiquitous, and viewers' autonomy over media consumption in this context is an important consideration when analyzing viewers' PSEs during everyday media use. For both studies (Chapters 5.1 and 5.2), participants who watched Netflix primarily on their computers were recruited to facilitate the use of a browser extension that tracked Netflix use (BWDAT; Cordeiro et al., 2021). Each time participants opened Netflix, the extension prompted them to complete a short survey before starting media consumption. Each time they closed Netflix, the extension prompted them to complete a short survey that asked them to name a media character with which they engaged during that viewing session and assess their PSEs with this media character directly afterward. This multimethod design, which combined tracking data and experience sampling surveys, resulted in high external validity and made it possible for this dissertation to tackle existing research gaps.

4.1.1 Situational Aspects in Viewers' Parasocial Experiences

Using the methodology described above, the first study facilitated the exploration of an understudied perspective on parasocial research: whether situational factors influence viewers' PSEs. Existing research about viewers' PSEs can be categorized into three perspectives. The first focuses on the viewer characteristics that may influence PSEs by, for

example, assessing the role of personality traits, such as attachment style (e.g., J. Cohen, 2004; MacNeill & DiTommaso, 2023), self-esteem (e.g., Sun & Wu, 2012; Turner, 1993), and loneliness (e.g., Chory-Assad & Yanen, 2005; Lim & Kim, 2011). The second focuses on the media character characteristics that may influence viewers' PSEs with them; for example, various studies have assessed the influence of attraction (e.g., Knoll et al., 2015; Schmid & Klimmt, 2011), credibility (e.g., Phua, 2016; Sokolova & Kefi, 2020), and authenticity (e.g., Chen et al., 2022; Tsay-Vogel & Schwartz, 2014). These two perspectives appear frequently in existing parasocial studies that have demonstrated the potential of viewer and character characteristics to positively or negatively influence viewers' PSEs.

The third perspective, however, is less often the focus of studies on PSEs. This perspective focuses on characteristics that are neither stable traits of the viewers nor of the media characters; these include characteristics of the viewing situation that potentially differ in each viewing situation. Such characteristics include, for example, media exposure duration, viewers' situational media consumption motives, and viewers' engagement in other tasks during immediate media consumption. One possible reason why these situational factors are less studied is the methodological approach of PSE studies. To analyze situational factors, studies must focus on specific media exposure situations. General survey studies can ask viewers about their favorite media characters, but because of the general reference to the media character, this methodology cannot anchor responses to a specific instance of media exposure. Conversely, experience sampling surveys can pose questions about viewers' motives for engaging with media directly within the media exposure setting. Through technological advancements that make the application of such experience sampling tools easier (e.g., sending surveys via text messages or browser extensions), analyzing this third element of PSEs—the situational drivers of PSEs—is easier to realize.

The goal of the first article is to enhance the presence of this third perspective on PSEs within the existing literature, which often focuses on the characteristics of viewers or media characters. Thus, the research question that guides this article is as follows: *Which situational factors influence PSPs and PSRs in people's everyday media use?* Based on the findings of transportation, enjoyment, and entertainment research, which highlighted the influence of several situational characteristics, hypotheses were derived regarding similar influences on PSEs. The study assessed a nonexhaustive selection of factors that might differ between media exposure situations and might be considered relevant to PSEs. The obtained data facilitated an analysis of viewers' motives to engage in a particular media exposure situation, whether they multitasked during media exposure, and the extensiveness of viewing sessions as potential situational drivers of viewers' PSEs. This approach goes some way toward addressing the research gap concerning situational characteristics that may influence PSEs. The corresponding article explores with viewing motives, multitasking, and media use extensiveness selected characteristics anchored in each media exposure situation and their influence on viewers' PSPs and PSRs.

Analyzing these characteristics within the viewing situation involved a multimethod design that combined tracking data and experience sampling surveys. Using these data, viewers' PSEs were analyzed in the context of daily media use, uninhibited by viewing instructions. Accordingly, a broad and diverse range of available media characters is fully represented in the data. The only restriction imposed was the streaming platform Netflix; otherwise, viewers self-selected the media content they watched and, thus, the media characters with whom they might engage parasocially. These conditions, especially facilitating viewer autonomy, resulted in high external validity, and the study adds to the existing parasocial literature by focusing on the potential situational characteristics influencing viewers' PSEs.

4.1.2 *Media Character Diversity and Availability*

Through streaming platforms, viewers can access a wide variety of media content anywhere, anytime, and for as long as they want. The second article of this dissertation applies the same multimethod design as the first to analyze the types of media characters with whom viewers choose to engage parasocially during autonomous media use. Parasocial research often showed that the similarity between viewers and media characters increases viewers' PSEs (e.g., J. Cohen & Hershman-Shitrit, 2017; Fu et al., 2019; Phua, 2016; Stein et al., 2022; Webster & Campbell, 2022). In the context of increased viewer autonomy over media consumption and, consequently, access to media characters, the question of similarity has gained new importance, as viewers have more power in selecting similar or dissimilar media characters to parasocially encounter. Streaming platforms make a broad range of media content and characters available to viewers, such that during self-directed daily media use, viewers can choose to engage parasocially with many different characters. The second article of the dissertation explores whether viewers choose characters similar to themselves to interact with in their everyday use of streaming platforms parasocially.

Research into PSEs has demonstrated that similarity does influence viewers' PSEs. Some studies address single similarities, such as age or gender (e.g., D. Greenwood et al., 2021; Sokolova & Kefi, 2020), but fail to consider other factors that might differ between viewers and media characters. Other studies analyze a broader "general similarity" between viewers and characters, for example, by asking participants about "How similar to you perceive yourself to the media character?" without referring to a specific characteristic (e.g., Su et al., 2023). When similarity is assessed more broadly, different approaches are used, and different concepts may be obscured within similar terms. General similarity might refer to sociodemographic factors, but it might equally refer to shared values and attitudes or similar physical appearances. Another approach to similarity is to assess how similar viewers

perceive themselves to the media character (e.g., Stein et al., 2022; Ye et al., 2021). This approach relies solely on subjective similarity perceptions and does not account for the actual and objective similarities between viewers and characters. Due to these methodological differences, comparing research findings on the role that similarity plays in PSEs is difficult, resulting in a lack of understanding why individuals might experience stronger or weaker PSEs with (dis)similar characters.

To overcome these limitations, Article II (Chapter 5.2) applies the differentiation of similarity from interpersonal interactions, where researcher differentiate between perceived and actual similarity (Montoya et al., 2008). The degree to which two people have the same traits is termed *actual similarity*, while the degree to which someone considers another person similar is termed *perceived similarity* (Wortman et al., 2014). Psychological research has found different effects for perceived and actual similarities in social interactions and relationships, for example, on their motivation to investigate in the relationship or the attraction of the other person (e.g., Hampton et al., 2019; Montoya et al., 2008; Montoya & Horton, 2013). This study thus investigates this differentiation in the context of a mediated setting and assesses the influence of both similarity types on viewers' PSP to answer the following research question: *How do actual and viewer-perceived similarities between media characters and viewers relate to the strength of PSP?* The differences between both similarity types are seldom accounted for in research about mediated encounters (see, for exceptions, J. Cohen & Hershman-Shitrit, 2017; Webster & Campbell, 2022); thus, the study adds to the few existing findings by respecting viewers' autonomy in selecting (dis)similar media characters for their PSEs and by providing a study design with high external validity.

Another strength of Article II (Chapter 5.2) is its broad perspective on similarity. Sociodemographic similarity is a multifaceted concept that consists of several types of similarity. Based on existing research about the role of similarity in PSEs, this study explores

hypotheses about the relationship between sociodemographic similarities, such as age, gender, job, relationship, and living situation and PSP. Psychological similarities and their effects on viewers' PSEs are also considered. To accomplish this, psychological traits that are central to parasocial research (Liebers & Schramm, 2019), such as the Big Five personality traits, loneliness, and self-esteem, were selected to assess their effects on viewers' PSP. Conceptualizing similarity in this way, based on different sociodemographic and psychological characteristics, adds to existing research findings by capturing similarity more holistically.

A significant strength of this article is its multimethod design. In addition to Netflix tacking data and experience sampling surveys that assess PSP based on watched content, the data were supplemented with content analysis of objective viewer-character similarity. Viewers self-assessed their sociodemographic and personality traits, and then independent coders indicated the same information for the media characters with whom viewers reported having PSPs. Using a codebook and independent of the viewers' evaluations, the coders categorized the media characters' sociodemographic and personality traits. This approach resulted in similarity assessments that were more objective than the viewer-perceived similarity assessments, which were also assessed. This multimethod design afforded the study several advantages, including high external validity, strong representation of the diverse media characters available in viewers' everyday lives, and viewer self-selection of media content and characters.

4.1.3 Viewers' Autonomy in the Dissolution of Parasocial Relationships

Increased viewer autonomy over media consumption is also hypothesized to influence viewers' experiences of PSRs when these relationships end. The dissertation's third article explores viewers' PSB in the context of on-demand streaming media platforms. Only a few parasocial research studies have focused on viewers' distress following PSBs. From 1956 to

2015 and from 2016 to 2020, only 1% and 7% of the studies, respectively, focused on PSBs. This is not due to the lack of relevance of PSBs. One reason for this research gap might be that the analysis of real-live PSBs is methodologically challenging. While in the existing research, mainly the relationship between PSRs and PSBs at one point in time was analyzed, few studies have analyzed this relationship over time. Additionally, although temporary and definite PSBs have been the focus of some studies, their effects on viewers' feelings and behaviors are seldom compared. Thus, significant opportunities to advance the study of PSBs exist. The third article of the dissertation engages with some of these opportunities by addressing the overarching research question: *How do PSRs, PSB distress, and the relationship between them differ with regard to temporary, uncertain, and definite breakups?*

While existing studies have differentiated between definite and temporary PSBs, changes in media production have introduced a new and prevalent PSB type, the *uncertain* PSB. As streaming platforms now often release entire seasons at once (Granow et al., 2018), viewers often experience uncertainty about the future of their PSRs at the end of a season when it is unclear whether or when new episodes starring the object of their PSR will be released. While viewers can watch episodes whenever they choose, they must endure uncertainty over their PSR when they finish a new season. The third article applies uncertainty reduction theory to explore the role of uncertainty in viewers' PSRs and compares the effects of an uncertain PSB with those of temporary and definite PSBs. With that, the study's findings advance existing research on PSBs by considering nowadays' media use habits and individuals' strive for uncertainty reduction.

To achieve these aims, a longitudinal design was employed to observe the relationship between PSRs and subsequent PSBs and PSRs over time. The strength of this article lies in its two-study approach to answering the research question. The first study uses an independent sample, and the second study uses a dependent sample. Both studies assessed the individual

development of PSR and PSBs over time, with a focus on fictional media characters from popular productions, such as *Bridgerton*, *Emily in Paris*, and *Peaky Blinders*. The data collection was always conducted just before and just after a new season was released for each show, with viewers defining their existing PSRs and PSBs with the characters prior to release and redefining them after the conclusion of the new season. This design allowed each participant to watch the new show at their own pace after the release, while ensuring that viewers' PSRs and PSBs were assessed shortly after media exposure to prevent the introduction of biases or memory changes. These methodological choices facilitated an analysis of viewer PSRs and PSBs with media characters that respected and reflected self-selected streaming media engagement.

4.2 Measurement of Viewers' Parasocial Processing in Experience Sampling Studies

The results of the experience sampling studies demonstrated the need for a short scale to assess viewers' PSEs ecologically and to better fit current media consumption patterns. For assessing PSR and PSI in empirical studies, validated and ecological measurements exist (Dibble et al., 2023). The measurement of PSP, however, is more challenging. Hartmann and Schramm's PSI Process Scale (Schramm & Hartmann, 2008) exists to assess PSP. However, the scale is very extensive with 112 items, and therefore not suitable for experience sampling studies. Thus, the goal of the fourth article of this dissertation was to develop a short scale to measure PSP to improve available PSEs measurements. In addition to its ecological applicability to everyday viewing settings, the short scale introduces a new tool to the existing body of PSI and PSR measurements. The developed short scale aligns with the definition of PSP as viewers' general psychological involvement with media characters during media use (Schramm & Hartmann, 2008). The scale can be used to assess viewers' PSES with different media characters and in experience sampling studies that assess viewers' PSEs directly after immediate media exposure.

Several scales have been established to measure PSEs, but many of the conceptual overlaps and ambiguous definitions that emerged in early parasocial research are reflected in these measurements (Dibble et al., 2023). Despite Rubin et al.'s (1985) PSI Scale measuring PSR rather than PSI, as the name suggests (Dibble et al., 2016; Rubin & Perse, 1987), it remains one of the most commonly used scales in parasocial research, and often results in researchers failing to clearly label which concepts they are measuring (Schramm et al., 2022). According to the definitions introduced in Chapter 0, three scales match existing theoretical descriptions of the PSE concepts. First, Hartmann and Goldhoorn's (2011) six-item EPSI Scale, which accurately assesses viewers' PSI, defined as the sense of being in an illusionary interaction with a media character, is both is easily to administer and demonstrates good internal consistency in several empirical studies (Dibble et al., 2023). Second, Tukachinsky's (2011) PSR Scale, which accurately measures viewers' perceived friendship with a media character, has been tested for internal consistency and can be used in different study settings and with various media characters (Dibble et al., 2023). Thus, two validated and ecological measurements exist to assess PSI and PSR, respectively.

Measuring PSP is more challenging. Schramm and Hartmann's (2008b, p. 387) PSI-Process Scales defines PSI as PSP. Despite the confusion introduced by the inclusion of PSI in its name, the scale nevertheless accurately assesses viewers' broad psychological involvement with a media character. However, with 112 items, the scale is hard to administer, and its three dimensions—cognitive, affective, and conative PSP—have not been validated through factor analysis. In practice, researchers often apply an unjustified or undisclosed selection of items, such that comparability of results is difficult (Dibble et al., 2023). Thus, for the empirical assessment, there is a need for a short scale to measure viewer PSEs. The limitations of unjustified item selections or the need to apply a very long scale could be avoided, and the scale could also be applied in experience sampling studies. This would

benefit the field of parasocial research by providing a validated and short measurement to explore the PSE phenomena from a broader perspective and more holistically. Thus, the overarching research question guiding the fourth article is as follows: *How can PSP be measured reliably and validly by means of a short scale?*

In today's media environment, with viewers self-selected and self-directed media consumption, the PSP gains importance, as viewers encounter regularly and embedded in their daily lives very diverse media characters that they might process. In the experience sampling study reported as pretest in the second article (Chapter 5.2.1), the results showed that viewers had very few PSI experiences. This may be related to their ability to self-select Netflix content anywhere and at any time; they are well aware of the mediated setting. Therefore, it is unsurprising that viewers may not perceive the media characters as being aware of them or speaking directly to them. In the same setting, viewers' PSR can assess their more enduring friendship-like bond with the media character that outlasts the concrete media exposure situation; however, viewers' instant processing of the mediated encounter directly during or after media exposure is not covered. Therefore, analyzing the PSP that occurs in these experience sampling settings is important. PSP is conceptually anchored in a concrete viewing situation, and experience sampling surveys facilitate PSP measurement directly after media exposure. By focusing on PSP rather than PSI, viewers' PSEs' concepts broadened to encompass their general psychological involvement with a media character. Thus, focusing on PSP in experience sampling studies is reasonable, and to do so, a matching measurement is required.

The fourth article of this dissertation has several strengths. First, a short scale was derived based on the existing and widely applied PSI-Process Scales (Schramm & Hartmann, 2008). The selection of items for the short scale was adjusted to fit the experience sampling context such that the resulting scale was easily administered to assess diverse media settings

and various media characters. Second, the scale development progressed through three empirical studies that determined factor analysis and discriminant validity. Third, the short scale was analyzed to establish its relationship to previously mentioned parasocial scales (e.g., the PSI Scale, Rubin et al., 1985; Rubin & Perse, 1987; the EPSI Scale, Hartmann & Goldhoorn, 2011; the PSR Scale, Tukachinsky, 2011; and the Identification Scale, J. Cohen, 2001). The article concludes by presenting a nine-item short scale for measuring cognitive, affective, and conative PSP. The PSP short scale is a good complement to the longer PSI-Process Scale (Schramm & Hartmann, 2008), to the EPSI scale – which assesses PSI as an illusion of being in an interaction with the media character (Hartmann & Goldhoorn, 2011) – and to the PSF scale – which assesses PSR as a feeling of friendship with a media character (Tukachinsky, 2011).

5 Research Articles

5.1 *Article I: Exploring Everyday Media Use: Situational Drivers of Parasocial*

Interactions and Relationships

This article is under review at the journal *New Media and Society* since 26 March 2024. In this article, PSI is defined as parasocial processing (PSP).

CRedit statement: Michelle Möri: conceptualization, methodology, investigation, data curation, formal analysis, writing (original draft), project administration, funding acquisition. Dominique Wirz: conceptualization, methodology, investigation, writing (review & editing), supervision, funding acquisition. Andreas Fahr: conceptualization, methodology, writing (review & editing), supervision, funding acquisition.

Open data: The pre-registration, material, code, and supplemental material of this study can be found on OSF: <https://bit.ly/3MSc7fL>.

Abstract: Parasocial interactions (PSIs) and relationships (PSRs) are crucial in media use. Studies of PSIs and PSRs often focus on the characteristics of viewers or of characters but do not examine factors surrounding the viewing situation in viewers' everyday media use. But PSIs/PSRs result from interactions between media characters, viewers, and the viewing situation. Analyzing situational factors characterizing viewers' everyday viewing situations is relevant. Nowadays, viewers can access content from anywhere, anytime, through streaming platforms, giving viewers more autonomy over parasocial experiences. This pre-registered study analyzed viewing motives, content-related and unrelated multitasking, and viewing session extensiveness as potential situational drivers for PSIs and PSRs. It combined usage tracking and surveys to cover the processes close to viewers' everyday media use. The results show that PSIs depend on viewers' motives for social interaction and escapism, engagement in non-media multitasking, and self-assessed viewing intensity. No situational factors influenced viewers' PSRs.

Keywords: parasocial relationships, parasocial interactions, tracking data, experience sampling, viewing motives, multitasking

Understanding how viewers process media characters is essential in analyzing their media content engagement. Parasocial experiences – the one-sided social interactions of media users with media characters – are crucial for enjoyment (e.g., Klimmt et al., 2006), persuasive effects (e.g., Rosaen et al., 2019), prolonged exposure (e.g., Billard, 2019), and many other media effects. Within the plethora of research on parasocial experiences (for an overview, see Liebers and Schramm, 2016; Schramm et al., 2022), various concepts have emerged, whereby *parasocial experiences* (PSEs) is used as an umbrella term (Tukachinsky Forster, 2023) that subsumes two distinct concepts, that have however often been used interchangeably: *parasocial relationships* (PSR) and *parasocial interactions* (PSI). PSRs are enduring bonds audience members develop with characters beyond the viewing situation, similar to social friendships (Rosaen and Dibble, 2016). PSIs are limited to media exposure (Dibble et al., 2016) and are often defined as the viewers’ illusion of being in a conversation with a media character (Hartmann and Goldhoorn, 2011). PSI can however also be defined more broadly as “parasocial processing” (Schramm and Hartmann, 2008: 387), which is the perspective that we adopt in this paper. PSI as parasocial processing covers “the degree to which the individual interacts psychologically with a media character” (Schramm and Hartmann, 2008: 388).

Research analyzing PSEs often focuses on two key topics. First, viewers’ personality traits, such as attachment style and loneliness, are related to PSEs. Second, characters’ characteristics, such as physical attraction and credibility, are related to viewers’ PSEs. A third research domain concerns *situational factors* (Liebers and Schramm, 2016), which subsume all characteristics of the viewing situation that cannot be categorized as characteristics of either party. Such factors are, for example, the duration of a media use episode, that was shown to increase viewers’ PSEs (Erickson et al., 2019; Tukachinsky and Eyal, 2018). These factors are an understudied aspect of research on PSEs (Schramm et al., 2022). However, viewers’ PSRs and PSIs result from interactions between media characters, viewers, and viewing situations.

Especially nowadays, as media users can use media whenever, wherever, and for as long as they please, it is important to consider the role of situational influences on viewers' PSEs . Further, technological advancements in media research facilitate the investigation of situational factors, which potentially vary in each media use situation and thus have to be measured in-situ. Therefore, we investigate *how situational factors influence PSI and PSRs in people's everyday media use*.

Situational Factors of each Viewing Situation

Situational factors are essential when analyzing everyday media use, as technological advancements have changed how audiences engage with characters. Whereas linear television programs dictated the time and amount of mediated encounters, audiences can now choose from various characters with whom they want to engage, anywhere, at any time. Audiences have more autonomy in media consumption—and mediated encounters—than ever before (Jenner, 2020). It is therefore important to understand how viewers' self-directed watching behavior in real life settings influences their processing of media characters, which subsequently affects viewers' emotions, enjoyment, and entertainment (Klimmt et al., 2006).

Situational factors of a viewing session cover a variety of factors. As a first step to explore them, this study focuses on a non-exhaustive selection of situational factors that were shown to be relevant to PSEs in general or to other forms of viewers' processing of media content (i.e., transportation, entertainment). There are 1) viewing motives, 2) multitasking, and 3) extensiveness of a viewing session. While previous research measured these factors as trait-like constructs as a proxy for situational influences, we use an innovative in-situ approach and measure them as states in each media use episode. It is not hard to imagine that situational characteristics of media use vary within an individual, and that measuring general habits may fall short of explaining their influence on immediate outcomes of media use.

Studies analyzed viewers' general motives for using a specific media platform with media characters (Blight et al., 2017; Liu et al., 2019) or generally to encounter their favorite media character (Kurtin et al., 2018; Tsay and Bodine, 2012). However, these studies treated viewing motives as trait variables, and did not analyze viewing motives potentially varying in each viewing situation. In his discussion of viewing motives, Rubin already stressed the importance of considering situational and social environment conditions (Rubin, 1983). For example, the same viewer might have a strong need for companionship when consuming media in the morning, but after a busy day at work with a lot of people, the same viewers' need for companionship might be low, and their primary motivation to use media may be relaxation. This may affect the extent to which they engage with media characters.

Viewers' engagement in *multitasking* is an influential driver for other types of psychological processing of media content. Viewers multitasking unrelated to the media content decreased viewers' transportation (e.g., Park et al., 2019; Zwarun and Hall, 2012) and enjoyment (e.g., Elishar-Malka et al., 2021; Park et al., 2019), whereas content-related multitasking increased viewers' transportation and enjoyment (e.g., Elishar-Malka et al., 2021; Smith et al., 2019). Effects of multitasking on PSEs have not yet been investigated, but it seems plausible that distractions from the media content in the form of content-unrelated multitasking reduce the interaction with media characters.

Finally, the formal characteristics of a viewing situation, such as its length, also potentially differ in each media use situation, and generally influence viewers' processing of characters. The extensiveness of a viewing session was analyzed under the term "binge-watching" (see, for an overview: Flayelle et al., 2020). Generally, it was assumed that extensive viewing sessions should result in a strong immersion, and with that, PSEs should be favored (Tukachinsky, 2020). Extensive viewing sessions—described by the time spent watching or the number of episodes watched—were shown to increase PSEs (Erickson et al., 2019; Tukachinsky

and Eyal, 2018). The longer viewers consume media content, the more opportunities they have to engage with media characters, and the more intense they may experience PSEs. Based on these considerations, this study takes a first step in examining situational factors as potential drivers of PSEs.

Parasocial Interactions and Relationships in Viewers' Everyday Media Use

Field studies documenting PSEs in people's everyday media use are rare (Tukachinsky Forster, 2023), however, they are necessary to assess situational drivers of PSEs. PSEs have often been examined in experimental studies, which, however, create artificial viewing situations and often hold situational characteristics constant. Survey studies investigating PSEs commonly have a considerable time lag media use and measurement; memory changes or biases, and generalizations make it difficult to analyze a viewing situation's context. For example, survey questions might ask about general motives to watch a show with one's favorite character. This captures viewing motives as trait-like viewer characteristics and not as situational factors. To assess situational viewing motives, the question should be asked directly within the viewing episode.

While the influence of situational factors on other psychological media effects, such as enjoyment or transportation, has been shown (e.g., Elishar-Malka et al., 2021; Park et al., 2019), their effect on PSEs remains a research gap. Therefore, this study focuses on situational factors as potential drivers of PSEs. We conducted an observational field study with usage tracking and surveys directly before and after each viewing session. The design enables the analysis of situational drivers for PSEs within peoples' everyday media use.

In the following, hypotheses are derived for the potential influence of situational factors on PSEs. The hypotheses focus on both concepts, PSIs and PSRs. Research clearly differentiating both constructs and considering situational factors in analyzing PSEs is insufficient to allow for formulating different hypotheses. Thus, we formulated all hypotheses

with the same assumptions for PSIs/PSRs, knowing that both concepts differ. Most importantly, in this context, PSI is strongly connected to media exposure, while PSR develops beyond (Klimmt et al., 2006). We assume that situational factors have a stronger effect on the immediate experience and, with that, on PSI. Since PSRs can evolve from PSI (Dibble et al., 2016; Gleich, 1996), we expect that each will be influenced similarly, although PSRs probably to a limited extent.

Media Use Motives

In each situation, viewers can have different motives to use media, which, in turn, can influence their PSEs. Based on the uses and gratifications theory, PSI was assumed to result from viewers seeking companionship and social gratification through the sense of belonging (Rubin et al., 1985). For different content, viewers' motives to consume media and the link to PSEs were analyzed (e.g., television or social media platforms; Liu et al., 2019; Spinda et al., 2009). Viewers engaging in media use for *companionship* have the situational need for mediated encounters (Rubin and Step, 2000). This motive may increase PSEs by focusing strongly on characters (e.g., Kurtin et al., 2019). *Social interaction* describes the motivation to watch media to have something to discuss with others (Rubin, 1983). In several studies, this was generally associated with stronger PSEs (Ebersole and Woods, 2007; Spinda et al., 2009). Engaging in media to *escape* or for *entertainment* increased PSEs, while the more passive motives of *passing time* and *habit* were unrelated to stronger PSEs (Ebersole and Woods, 2007; Liu et al., 2019). It might seem counterintuitive to analyze habit as a situational motive; in this context, it refers to consuming media out of habit (e.g., "I always watch Netflix before sleeping") or having a specific motive (e.g., "I want to escape my daily life right now"). Based on these studies for general or aggregated viewing motives, the hypothesis analyzing them as situational factors was derived:

Situational motives to use media for (a) companionship, (b) social interaction, (c) escape, and (d) entertainment increase viewers' strength of PSI (H1) and PSRs (H2) compared to (e) habit and (f) passing time.

Multitasking During Media Use

Engaging in other tasks than watching media can influence viewers' attention, and with that, their PSEs. In natural viewing settings, audience members may use several devices simultaneously for media consumption; that is, they engage in *media multitasking* (Nee and Barker, 2020). *Content-unrelated* multitasking comprises the simultaneous use of media and non-media tasks, two different media, or two tasks on a single medium (Jeong and Hwang, 2016). The influence of content-unrelated multitasking—especially the use of a second device—was shown to decrease transportation (e.g., Park et al., 2019; Zwarun and Hall, 2012) and enjoyment (e.g., Elishar-Malka et al., 2021; Park et al., 2019).

Content-related multitasking includes viewers' immediate exchange with other people about the media content they are consuming. Thereby, their exchange with physically present people or with people they are virtually connected to (i.e., on social media platforms or messaging apps), can be distinguished (Jeong and Hwang, 2016). Both concepts rely on the social component of media consumption with individuals exchanging about the content either in the same physical or virtual space (Nee and Barker, 2020).

Studies linking content-related and unrelated multitasking to PSEs are rare, so the hypotheses are derived from research on transportation and enjoyment. We assume that unrelated multitasking decreases PSEs, since viewers' focus is distracted, reducing their engagement with characters. Content-related multitasking is supposed to increase PSEs, since it reinforces the focus on the content and, with that, the characters:

Viewers' (a) multitasking with content-related activities during media exposure increases, while (b) multitasking with content-unrelated activities decreases, PSI (H3) and PSRs (H4).

Extensive and Intense Viewing Sessions

The extensiveness of a viewing session is a potential driver of viewers' PSEs. The time viewers spend with characters positively influences PSEs (e.g., Kurtin et al., 2019; Liu et al., 2019). In different contexts, it was shown that the frequency or time spent watching media content, such as on YouTube (Tolbert and Drogos, 2019) or streaming platforms (Rubenking et al., 2018), positively influences PSEs. The freedom of choosing when, where, and how long to consume content has led to new viewing habits, such as prolonged viewing sessions, with PSEs examined in this context (e.g., Anghelcev et al., 2021; Billard, 2019; Czichon, 2019; Dyche, 2017; Erickson et al., 2019; Nanda and Banerjee, 2020; Perks, 2019; Rubenking et al., 2018; Tukachinsky and Eyal, 2018; Walter et al., 2018). From these studies, it can be assumed that extensive viewing sessions intensify PSEs.

Due to criticism of the definitions of binge-watching (e.g., Pittman and Steiner, 2021), characteristics that describe the extensiveness of viewing sessions are analyzed separately to control for different effects of these definitions of extensiveness; these are the *number of watched episodes* (derived from definitions of binge-watching; e.g., Pittman and Sheehan, 2015; Walton-Pattison et al., 2018), the *duration* of a session (to address criticism regarding the binge-watching definition, see Horvath et al., 2017; Panda and Pandey, 2017), and the self-assessed watching intensity (to address individual factors, see Rubenking et al., 2018).

The extent of a viewing session, in terms of (a) the number of episodes watched in one sitting, (b) the duration of the watching session, and (c) the self-assessed watching intensity, positively influences PSI (H5) and PSRs (H6).

Method

Research Design and Procedure

A field study conducted in January/February 2023 tracked participants' use on Netflix for two weeks. The usage data were complemented with surveys directly before and after each viewing session. The institutional review board approved the study design. Participants were recruited through the university's mailing list—consisting of BA, MA, and PhD students—and through snowballing system. Individuals 18 years or older and with access to Netflix were eligible. Individuals who met these requirements received detailed information and then provided written informed consent if they wished to participate.

Participants installed the BWDAT extension to Google Chrome (Cordeiro et al., 2021). After their first login, a survey about their sociodemographics and personality traits appeared. For two weeks, whenever the participants opened or closed Netflix¹, a short survey appeared. Before each viewing session, they were asked about their viewing motives. After each session, they reported their multitasking, and their perceived viewing intensity. They named a character from their watched content, and their PSI and PSRs were assessed. After two weeks, they received instructions to uninstall the extension and a financial incentive.

Tracking Data and Final Sample

In total, 693 viewing sessions of 94 participants were tracked. From these, 628 valid post-session surveys were completed, with those not completed within 1 hour excluded ($n = 40$) to avoid the influence of factors other than the viewing situation. Viewing sessions lasting less than 10 minutes were excluded ($n = 28$) to ensure the participants did not just switch on and off. The participants could skip the PSI/PSR questions, for example, when they watched documentaries ($n = 203$; “None of the characters seemed relevant to me”). With that, 357 viewing sessions covered all items to analyze situational factors for PSI/PSRs.

The participants were aged 18–38 years ($M=23.14$, $SD=4.13$). Of them, 81% identified as female, 18% as male, and 1% as non-binary. At the time of data collection, they were all living in [country].

Tracking Data

All watched content was tracked according to the content's title, season, and episode number with time stamps.

Extension of Viewing Sessions

The duration was assessed through tracking data. If different shows were watched, the number of episodes and duration referred to the content to which the selected character belonged. If someone watched two episodes of *Gilmore Girls* and three episodes of *Dark* and had chosen Rory from *Gilmore Girls* as the character, only the time spent watching the two episodes of *Gilmore Girls* were used. On average, viewing sessions lasted 01:35:15 ($SD=01:17:08$), and viewers watched three episodes ($M=2.6$, $SD=2.70$). As the duration of viewing sessions was strongly right-skewed with a few large values, we applied square root transformation before analysis (Field, 2016).

Survey Measures

All items were measured using a five-point Likert-type scale from 1 (e.g., “do not agree at all”) to 5 (e.g., “fully agree”). The full scales are available on OSF. Cronbach's alpha was calculated with *psych* (Shrout and Lane, 2012) and for constructs on the session level with *multilevel.reliability* (Revelle and Wilt, 2019)².

Viewers' Usage Motives

In the pre-session survey, viewers' viewing motives were assessed using an adapted version of Rubin's (1983) television viewing motives, as no specific scale exists to assess viewing motives in this context. One exception is the Watching TV Series Motives Scale (Flayelle et al., 2019),

which is neither applicable to all content available on Netflix. Each viewing motive, namely companionship ($M=2.29$, $SD=1.41$), social interaction ($M=1.43$, $SD=.94$), escape ($M=2.90$, $SD=1.59$), entertainment ($M=4.37$, $SD=1.00$), habit ($M=3.14$, $SD=1.43$), and passing the time ($M=2.51$, $SD=1.37$), was assessed with one item. Single-item measures are common in experience sampling studies to prevent participants' fatigue. Using single-items for unidimensional constructs has been proven valid (e.g., Johannes et al., 2021; Otto et al., 2020).

Self-Assessed Viewing Intensity

After each viewing session, the participants were asked about its perceived intensity ($M=3.99$, $SD=1.09$, $\alpha=.93$) with three items derived from Pittman and Steiner's (2019, 2021) experimental manipulation of viewing attentiveness.

Parasocial Interactions

PSIs ($M=3.82$, $SD=.71$, $\alpha=.93$.) were assessed with six items of Schramm & Hartmann's (2008) PSI-Process Scale.

Parasocial Relationships

The PSRs ($M=3.03$, $SD=1.06$, $\alpha=.93$) were examined using eight items of the parasocial friendship scale (Tukachinsky, 2011).

Multitasking, Co-Viewing, and Social Viewing

Content-unrelated multitasking was split into three categories, following Jeong and Huwang (2016), namely multitasking on the same medium (e.g., browsing the Internet; 11% of sessions), multitasking on another device (e.g., checking mail on a smartphone; 34%), and multitasking with a non-media task (e.g., cooking; 25%).

The participants were asked if they exchanged with co-viewers about the content and if they had done so virtually with two items based on other studies (e.g., Cohen and Lancaster,

2014; Nee and Barker, 2020). Viewers engaged in content-related multitasking with physical present others in 10% of the sessions, and in 3% with virtual present others.

Variables for the Additional Analyses

The personality traits were measured as state variables once in the first survey of the study that was assessed before the usage tracking started. Viewers' loneliness ($M=1.60$, $SD=.56$, $\alpha=.88$, 10 items) was measured with the UCLA Loneliness Scale (Russell et al., 1980), and their attachment style ($M=2.56$, $SD=.71$, $\alpha=.72$, 9 items) with the Adult Attachment Scale (Collins and Read, 1990).

Results

Multilevel analyses were conducted with the R packages *lme4* and *lmerTest* and accounted for unbalanced data (Hox et al., 2017); not all participants (level 2) had the same number of viewing sessions (level 1). The participants engaged in 1–21 viewing sessions ($M=3.92$, $SD=3.76$). Two null models were run to assess the intraclass correlation coefficient (ICC). In both models, about 40% of the variance in PSI/PSR was explained by the viewers, meaning that an important amount of the variance was explained by factors connected to the viewing session³. These results underline the assumption that situational factors are important for PSI/PSRs.

Table 1 shows the results for viewers' viewing motives. H1 was partially supported, as social interaction (H1b) and escapism (H1c) had a positive effect on PSI, whereas habit and passing time had not. Contrary to our expectations, companionship (H1a) and entertainment (H1d) had no positive effect on PSI. PSR was not affected by any viewing motive, thus, H2(a-d) is not supported.

Two models were calculated to test H3 and H4 (Table 2). The model for PSI showed that engaging in a non-mediated activity decreased PSI. Multitasking on the same device or

another device did not influence PSI. For content-related activities, exchanges with other people, both virtually and physically, did not affect PSI. H3(a) was rejected. H3(b) was only partially confirmed since the assumed pattern of content-unrelated activities decreasing PSI was only confirmed for multitasking with non-media activities. None of the content-unrelated and content-related activities influenced viewers' PSRs. Thus, H4(a) and H4(b) were rejected.

The results of H5 and H6 (Table 3) show similar patterns for PSI/PSRs. The number of episodes did not influence PSI/PSRs (H5(a) and H6(a) rejected). The duration of viewing sessions influenced neither PSI nor PSRs (H5(b) and H6(b) rejected). Self-assessed viewing intensity increased viewers' PSI and PSRs, supporting H5(c) and H6(c).

Additional Analyses

To demonstrate that the situational factors had explanatory power beyond traditional predictors for PSI/PSR, we included viewer personality traits in exploratory analyses. To do so, three predictors for PSEs were chosen that are often analyzed in parasocial research (Liebers and Schramm, 2019). First, we included gender, which is often analyzed, albeit with mixed results (Tukachinsky et al., 2020). Second, we included viewers' state of loneliness. The often-analyzed hypothesis that lonely viewers compensate with PSEs led to mixed results in parasocial research (e.g., Bernhold, 2019; Lim and Kim, 2011; Rubin et al., 1985; Wang et al., 2008). Nevertheless, viewers' loneliness is often analyzed as possible predictor for PSEs (Tukachinsky et al., 2020). Third, we included viewers' attachment style, which researchers often include because mediated encounters are comparable with social encounters (e.g., Cohen, 2004; Rosaen and Dibble, 2016). By including these variables, we could control if situational factors explain more variance in PSEs than personality traits.

All models were run with gender, loneliness, and attachment style as level 2 variables. The results are provided on OSF (<https://bit.ly/3MSc7fL>), and only changes in the results are discussed. For the model with participants' viewing motives, escapism ($b=.06$, $SE=.03$, $p=.051$)

was no longer significant. Viewers' loneliness negatively influenced their PSI ($b=-.26$, $SE=.13$, $p=.044$). Changes emerged when adding the personality traits in the models with multitasking. Multitasking with non-media tasks no longer significantly affected PSI ($b=-.17$, $SE=.09$, $p=.066$). Multitasking on the same device had a negative effect on PSR ($b=-.35$, $SE=.17$, $p=.041$). Viewers' attachment style positively influenced PSI ($b=.21$, $SE=.11$, $p=.045$), meaning that people with a secure attachment style experienced stronger PSI. For the influence of extensive viewing sessions on PSI, viewers' loneliness ($b=-.25$, $SE=.11$, $p=.024$) and attachment style ($b=.25$, $SE=.10$, $p=.013$) influenced PSI.

Overall, most of the situational influences on PSI persisted, even when controlling for viewers' gender, loneliness, and attachment style. The changes that occurred can probably be explained by the p -values close to the cut-off ($<.05$). Overall, the analyses underlined that situational drivers have explanatory power for PSEs that is not covered in common analyses of viewers' personality traits.

Discussion

Viewers' PSEs are crucial in media use. Whereas previous research analyzed characteristics of the characters or viewers, this study focused on situational drivers of PSI/PSR that can vary in each viewing situation. For this purpose, a field study was conducted in which viewers engaged in daily viewing habits, respecting their autonomy over the content they chose to watch. Within this setting, viewing motives, content-related and unrelated multitasking, and the extensiveness of viewing sessions were analyzed as potential situational factors influencing viewer PSEs. The innovative design combining usage tracking and experience sampling surveys enabled the analysis of such processes close to viewers' everyday media use.

With regard to viewing motives, viewers' motives to consume media for social interaction and escapism positively influenced PSI. If viewers watch media content for something to talk about with friends or to escape from daily life (Rubin, 1983), they engage

more strongly in this psychological processing of characters. One possible explanation is that viewers concentrate more on the content, resulting in a stronger involvement with the characters. The viewing motives of companionship, entertainment, habit, and passing time did not influence PSI. This is especially interesting for companionship. It is possible that the desire for companionship results in more superficial processing that is not reflected when measuring PSI as parasocial processing, defined as viewers' deeper psychological involvement with a character (Schramm and Hartmann, 2008). Another possible explanation for companionship is the applied measurement in this study. Before each viewing session, participants were asked if they want to watch Netflix "because it makes them feel less lonely". Thus, the measurement rather was a state assessment of loneliness instead of viewers' need for companionship in the immediate media exposure situation.

For content-unrelated activities (Jeong and Hwang, 2016), engaging in non-media tasks while consuming Netflix decreased viewer PSI. This seems plausible since viewers' engagement in other tasks might take up part of their cognitive resources that cannot be used for the processing of characters. When they browsed on the same or another device, their attention to the content and characters was probably still high enough. For multitasking, it should be considered that the causality cannot be proven; does the form of multitasking decrease viewers' PSI, or if people do not strongly engage with characters, do they engage in multitasking?

In this study, content-related activities were analyzed in the form of exchange with other people virtually and physically present (Nee and Barker, 2020). In the analyzed everyday viewing settings, it did not seem to matter if viewers exchanged with other people. It is important that only exchanges during media exposure were considered. If viewers, for example, watched content and talked about it with their friends on the next day, this was not included. It is possible that this form of viewers' exchanges with others who had watched the show

influences their PSRs in the long term. Another explanation is that content-related activities were analyzed. However, “content-related” does not necessarily mean “character-related.” In future PSE studies, asking about character-related exchanges might be worthwhile.

Several characteristics of viewing extensiveness and their influence on PSEs were assessed. The number of watched episodes and the duration of viewing sessions did not increase PSIs. The self-assessed watching intensity positively influenced both. Self-assessment might be a good measurement to respect individual factors and external circumstances when analyzing the extensiveness of viewing sessions (Rubenking et al., 2018). For the duration of viewing sessions and the number of episodes watched, we followed the approach used in binge-watching definitions limiting these to “the same show” (Granow et al., 2018), which was chosen because studies have shown that the time spent with a character influences PSIs (Bond and Calvert, 2014). By limiting the duration and episodes to one show with the character, we came closer to real exposure to that character. Still, there are variances not controlled for. For example, a protagonist appears more often than other characters.

Overall, PSRs were robust against influences of situational characteristics. With that, the findings align with the theoretical assumption that PSRs provide a long-term concept that can develop beyond media exposure (Tukachinsky, 2011). PSRs are often assumed to be trait dependent (Tsao, 1996), which also would explain the lack of situational influences. Another explanation could be the time of PSR assessment. It could be that these situational factors did not influence viewers’ PSRs directly after media exposure but their influence developed between viewing sessions. To analyze this, a repeated-measures design would be needed. While we had several viewing situations for all participants, these (mostly) did not refer to the same

character.² For future research, it would be desirable to use the same research design and instruct participants to stick to one show and the same character to investigate the effect of situational characteristics on the development of PSRs over time.

When interpreting the study's findings, some factors need to be considered. First, in multilevel setting with participants choosing a different character in each viewing session, the characteristics of the character are factors bound to the concrete viewing situation. The ICC of both models, with about 60% of the variance in PSIs/PSRs explained through factors on the viewing situation, includes characteristics of the characters. Additionally, error terms are included in this variance, so that not only situational factors contribute for the explanation of PSIs/PSRs. Still, with this study including several viewing sessions for each participant, it could be shown that situational factors matter for PSI/PSRs, and they do so beyond the often-analyzed stable personality traits.

Second, tracking study samples include systematic biases. A recent study showed women, older people, and people with a lower level of education are more likely not to participate in or to drop out of tracking studies. One of the most commonly indicated reasons was that participants did not install unknown software or feared for their personal safety (Gil-López et al., 2023). Due to the process of providing informed consent beforehand, allowing participants to install tracking programs themselves, and then registering and participating in the study, it is probable that systematic dropout was included in this study's sample.

Third, the dropout in the tracking data needs to be considered. Sessions were excluded if they had no watched content, a too short duration, or if participants did not complete the surveys. The resulting dropout rate resulted in a smaller sample than assumed with the power

² In the pre-registration, we registered one hypothesis to analyze the influence of PSI on subsequent PSRs with the same media character. The descriptive analysis is presented on OSF, however, the model resulted in singular fit.

analysis conducted before data collection (see OSF). Based on Arend and Schäfer's simulation studies (2019), with our medium ICCs and on average 4 viewing sessions (level 1) for 94 participants (level 2) the minimum detectable effect size is .18; thus medium effects were detectable with a power of $\geq .80$. As for some of the findings, the p-value was on the edge on being significant, it is possible that the effects were too small to be detectable with our sample. In future studies, it could be worthwhile reanalyzing these tendencies.

Another contribution to the reduction of the sample size was the option for participants to indicate that media characters were completely irrelevant. The option was included based on a pretest; in some content, the characters are of low relevance (e.g., animal documentaries). However, it might have led to the exclusion of sessions with low intensity PSI/PSRs or have been misused by participants to abbreviate the survey. The frequency in which this option was chosen (36%) shows that in the context of viewers self-directedly watching content on streaming platforms, the relevance of media characters could be smaller than assumed. It underlines the importance of considering other factors of media content and consumption. Media producers should consider the situation in which the content is consumed. One example is the promotion of binge-watching by Netflix, which is celebrated as the best way to consume content. With that, not only is the content promoted (e.g., binge-worthy shows), but so is how viewers should watch it (e.g., whole seasons in one sitting).

Fourth, this study explored only some situational factors that potentially influence PSIs/PSRs. This non-exhaustive selection should be expanded in future research. For example, further research could consider viewer-specific factors, such as current mood, arousal and activation levels, and environmental factors, such as location (e.g., at home, on public transport), the presence of other people (e.g., number of people, relationship to them), or devices used (e.g., smartphone screen, TV, large-screen projection). Exploring these situational aspects might advance the understanding of PSEs in viewers' everyday media use. In a next

step, then, the effects of such processing on further outcomes such as their entertainment, their gratifications, and on their real-live interactions and relationships should be assessed.

¹ Participants were informed that they must close Netflix for the survey to pop up. They were given instructions on how to open the survey with two clicks if they wanted to keep the tab open.

² The RkRn value is taken as measurement of the “generalizability of between-person differences averaged over time and items” (Revelle & Wilt, 2019, p. 44).

³ It is important that not all the remaining 60% of variance is explained through level 1 factors. It includes the error term and interaction effects of level 1 and level 2 variables. When the ICC is low, it is fruitful to consider level 1 factors.

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Tables

Table 1

Influence of viewing motives on viewers' parasocial Interactions and relationships.

	parasocial interactions			parasocial relationships		
Fixed effects	<i>Estimate</i>	<i>SE</i>	<i>p</i>	<i>Estimate</i>	<i>SE</i>	<i>p</i>
Intercept	3.30	.25	<.001	2.67	.37	<.001
Companionship	.03	.03	.342	-.02	.05	.639
Habit	.02	.03	.580	.07	.05	.209
Pass Time	-.01	.03	.728	.05	.05	.309
Entertainment	-.01	.04	.878	-.04	.07	.607
Social Interaction	.13	.05	.007	.01	.07	.923
Escapism	.06	.03	.022	.06	.04	.144
Random effects	<i>Variance</i>	<i>SD</i>		<i>Variance</i>	<i>SD</i>	
Intercept	.21	.46		.38	.62	
Residual	.32	.57		.78	.88	
ICC	.40			.33		

Note: 284 viewing sessions of 79 participants. ICC = adjusted intraclass correlation coefficient.

Table 2*Influence of viewers' engagement in multitasking on their parasocial interactions and relationships.*

	parasocial interactions			parasocial relationships		
Fixed effects	<i>Estimate</i>	<i>SE</i>	<i>p</i>	<i>Estimate</i>	<i>SE</i>	<i>p</i>
Intercept	3.78	.07	<.001	2.97	.11	<.001
multitasking (same device)	-.07	.11	.557	-.33	.17	.051
multitasking (another device)	-.05	.08	.549	.09	.13	.467
multitasking (non-media)	-.20	.09	.025	.08	.13	.545
co-viewing (physically present)	.13	.12	.273	.31	.18	.095
social viewing (virtually present)	.41	.21	.055	-.13	.31	.685
Random effects	<i>Variance</i>		<i>SD</i>	<i>Variance</i>		<i>SD</i>
Intercept	.18		.43	.46		.68
Residual	.32		.57	.72		.85
ICC	.36			.39		

Note: 357 viewing sessions of 91 participants. ICC = adjusted intraclass correlation coefficient.

Table 3*Influence of viewing extensiveness on their parasocial interactions and relationships.*

	parasocial interactions			parasocial relationships		
Fixed effects	<i>Estimate</i>	<i>SE</i>	<i>p</i>	<i>Estimate</i>	<i>SE</i>	<i>p</i>
Intercept	2.66	.16	<.001	2.57	.26	<.001
number of episodes	.01	.01	.652	.03	.02	.295
duration of viewing session	.15	.09	.083	-.23	.14	.089
self-assessed viewing intensity	.23	.03	<.001	.17	.05	.001
Random effects	<i>Variance</i>	<i>SD</i>		<i>Variance</i>	<i>SD</i>	
Intercept	.17	.41		.45	.67	
Residual	.28	.53		.71	.84	
ICC	.38			.39		

Note: Duration measured in hours was transformed with root square transformation to correct the skewness of the distribution. 357 viewing sessions of 91 participants. ICC = adjusted intraclass correlation coefficient.

5.1.1 Article I: Sample Size and Power Calculation

Before the start of the data collection, the sample size for the study was determined with a spreadsheet adapted from Scherbaum and Ferreter (2009), based on the formulas of Raudenbush (1997) and Snijders and Bosker (1993). The steps that were necessary to find a balance between number of participants and duration of data collection are reported below.

Stepwise calculation of estimated power

With the usage tracking, the data will be in a multilevel or hierarchical format, meaning that each participant will have a different number of viewing sessions that are tracked for the two weeks. In these multilevel analyses, unbalanced data can be handled: Not all participants need to have the same number of viewing sessions (Hox et al., 2017). Therefore, the goal of the sample size calculation was to find a good balance between the number of participants that can be supervised during the data collection, and the duration of the data collection that is not too long to avoid higher dropout rates in the surveys. To do so, the estimated power resulting from variations of number of participants and duration of data collection were compared to find the best solution.

The number of participants is the sample size at level 2, the number of viewing sessions is the sample size at level 1. In a first step, the estimated variance of the intercept and the estimated standard error is calculated. Following Hox et al. (2017), a medium variance is assumed ($\rho = .1$). With the two formulas below, the standard error of γ_{01} is estimated to be .005. The goal was to detect a small effect ($d = .30$) for a two-tailed test with $\gamma_{01} = .05$ ($Z_{1-\alpha/2} = 1.96$) with an estimated power of $\geq .90$.

$$var(\gamma_{01}) = \frac{4 (\rho + (1 - \rho)/n)}{J}$$

$$S.E. \gamma_{01} = \sqrt{var(\gamma_{01})}$$

$$Z_{1-\beta} \leq \frac{Effect\ Size}{Standard\ Error} - Z_{1-\alpha/2}$$

The sample size at level 1 was derived from preliminary studies conducted with the same design (e.g., Wirz et al., 2022). In these studies, participants engaged on average in four tracked viewing sessions during one week. Based on this number, the comparison for estimated powers based on the number of participants (level 2) and the duration of the data collection (level 1) could be done (Table 1/Figure 1).

Table 1: Estimates of statistical power at a small effect size under varying sample sizes at level 1 and level 2.

Number of Participants	Power			
	1 Week	2 Weeks	3 Weeks	4 Weeks
70	0.595	0.777	0.851	0.888
75	0.625	0.805	0.874	0.908
80	0.653	0.829	0.894	0.924
85	0.679	0.851	0.911	0.938
90	0.704	0.870	0.925	0.949
95	0.727	0.887	0.938	0.959
100	0.749	0.902	0.948	0.967
105	0.769	0.915	0.957	0.973
110	0.788	0.927	0.964	0.978
115	0.806	0.937	0.970	0.983
120	0.822	0.946	0.975	0.986
125	0.837	0.953	0.980	0.989
130	0.851	0.960	0.983	0.991
135	0.864	0.966	0.986	0.993
140	0.876	0.971	0.989	0.994
145	0.887	0.975	0.991	0.995
150	0.897	0.979	0.992	0.996
155	0.906	0.982	0.994	0.997
160	0.914	0.984	0.995	0.998

Note. The desired power sizes $\geq .90$ are highlighted in bold and italic writing.

Based on these power estimates, the desired power of $\geq .90$ could be achieved with a) 155 participants and usage tracking for one week, b) 100 participants and usage tracking for two weeks, c) 85 participants and usage tracking for three weeks, and d) 75 participants and usage tracking for four weeks. As in preliminary studies, the dropout rates for completing especially the surveys after having watched Netflix strongly increases after a longer time, we decided to recruit 100 participants and track their Netflix use for two weeks.

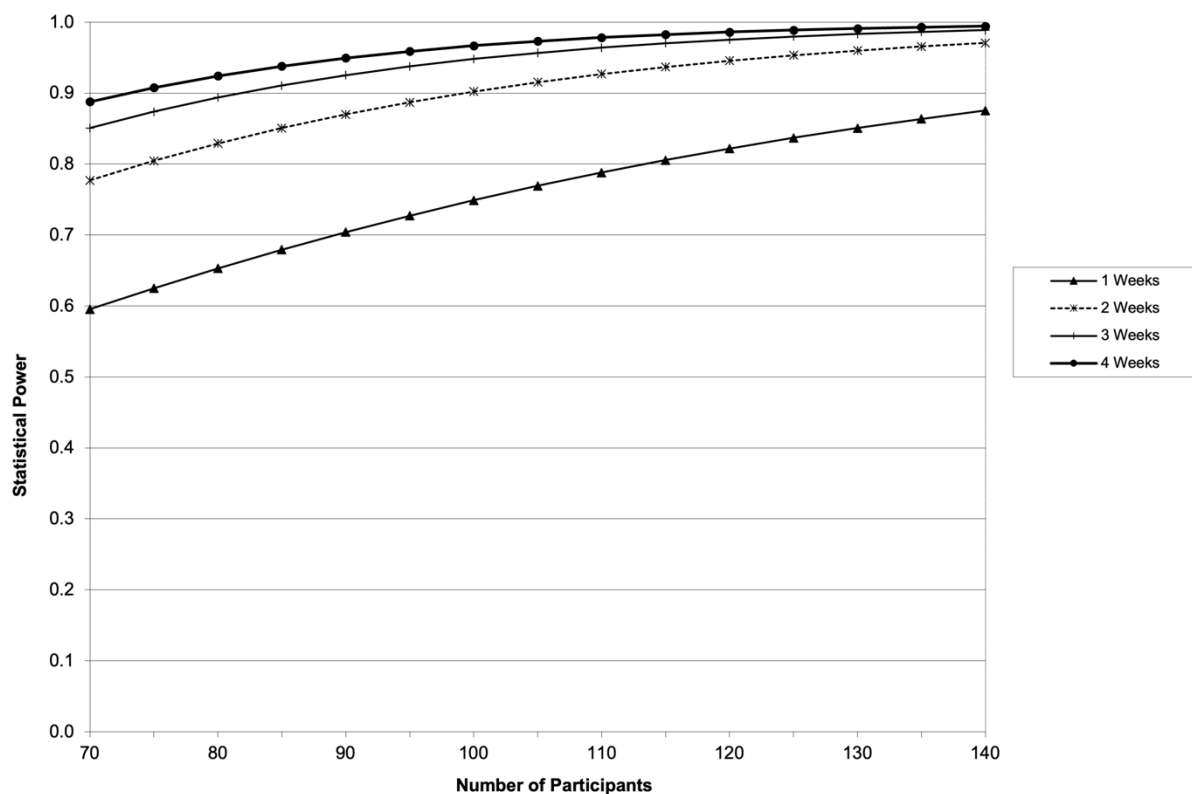


Figure 1. Estimates of statistical power to detect a small effect size under varying sample sizes at level 1 and level 2.

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5.1.2 Article I: Additional Analysis of PSI-PSR Development

In the original pre-registration for this article, another hypothesis was included to analyze the influence of PSI on subsequent PSRs with the same media characters. This hypothesis was not included in the journal article and its supplemental material and is, thus, added as supplemental material to the synopsis of this dissertation. First, the theoretical background of the hypothesis is shortly presented. Then, the context and the hypothesis analysis are discussed, followed by the results and their discussion and interpretation.

PSI-PSR Development Over Time

Parasocial interactions can be seen as a dependent variable influenced by different situational factors of the viewing situation. They can also be interpreted as an independent variable because PSI should positively impact subsequent parasocial relationships (Gleich, 1996; Klimmt et al., 2006; Tukachinsky & Stever, 2019). Following the development of PSI over a more extended period, the interaction between PSI and PSB over time has rarely been studied (Tukachinsky Forster, 2023). One exception is the study of Bonus et al. (2021). They showed that PSR strengthened over time. Therefore, they did not consider viewers' PSI between the measurements of PSR, so the study could not empirically test the assumption of PSIs influencing subsequent PSRs.

In this study's natural viewing setting, different PSR stages will be encountered. Viewers might have parasocial experiences with media characters they have known for a long time and with characters they meet for the first time. Some of their parasocial relationships start new, while others are longstanding. Thus, based on the original PSI-PSR model of Gleich (1997), it can be assumed that PSI and PSR generally positively reinforce each other over time.³

³ In the field study, viewers can choose what they want to see. It won't be known until after data collection whether there is enough information to analyze the development of parasocial interactions and relationships of a viewer with the same media character over time.

*H11) Parasocial interactions with a media character will positively influence subsequent parasocial relationships with the same media character over time.*²

Analysis of PSI-PSR Development

The hypothesis can be assessed using the data collection presented in the main article. In the original data set for the general analysis, 357 viewing sessions were included. The first step for the analysis of H11 was the preparation of the data set. To do so, only sessions of participants who selected the same media character from the same show at least twice were included. An additional variable was built to indicate the number of mediated encounters between the participant and the media character. For example, 1 for the first time, the participant chose the media character, 2 for the second time, and so on.

This additional data cleaning resulted in a data set of 32 participants with 120 viewing sessions. Most media characters were chosen twice by the same participant ($n = 30$). The most often chosen was one media character eight times and another five times. The other media characters were selected three ($n = 9$) and four ($n = 5$) times by the same participant. A multilevel regression model was estimated with PSI as the independent, PSR as the dependent variable, and the participant number as the grouping variable. The model can be calculated; however, it results in a singular fit, indicating that the power of the data is too small for the complexity of the model (Barr et al., 2013; Chung et al., 2013). Thus, the PSI-PSR development over time cannot be analyzed with the existing data set.

Discussion

The analysis of PSI and PSR development over time is an essential endeavor of parasocial research (Tukachinsky Forster, 2023). Based on Gleich's original "PSI-PSR circle model" (1997), PSIs should influence subsequent PSRs. As the analysis of PSI-PSR development over time is rare, empirical evidence for their interplay is lacking. Two studies analyzed PSR development over time without considering PSI. While Bonus et al. (2021)

showed that PSR strengthened over time, Siegenthaler et al. (2021) found no increase in PSR strength over time. Thus, further research is needed to explore PSI-PSR development over time.

Another necessary approach for the long-term perspective on PSR is the theoretical PSR development model (Tukachinsky & Stever, 2019). Based on this model, PSI influences subsequent PSRs. However, there are different relationship stages, such as initiation, experimentation, intensification, integration, and bonding. The connection between PSI and PSR can differ for each of these stages. For example, in the initiation stage, PSI cues can facilitate viewers' feeling of being addressed and included. At the experimentation stage, PSI can determine whether viewers are motivated to intensify their PSRs with the media character (Tukachinsky & Stever, 2019). Through this perspective on the interplay of PSI and PSR, a more nuanced analysis would be needed to determine the stage of PSR between viewers and media characters and, following that, the influence of PSIs on PSR at this stage.

Future research could explore this interplay between PSIs and PSRs in a natural viewing setting. Therefore, it is essential to consider the stage of audience members' PSRs to understand the relationship level more precisely between audience members and media characters (Tukachinsky & Stever, 2019). The analysis of PSI-PSR development in viewers' everyday media use is promising, as it can give additional information about integrating the media characters as supplementary friends in their daily lives. Thus, future studies should also consider individuals' social interactions and social relationships when analyzing their PSIs and PSRs to explore them embedded in the social context. Finally, future research could examine the role of PSIs in PSR development by analyzing viewers' PSRs with a specific media character, for example, one protagonist of a new show that the participants then need to watch or one influencer that the participants are then supposed to follow for a specific time. By doing so, the relationship stages could be considered, and the time of the development could also be explored.

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5.2 *Article II: Parasocial Interactions with Media Characters: The Role of Perceived and Objective Sociodemographic and Psychological Similarity*

This article was published in *Frontiers in Media Psychology* on 8 December 2023. <https://doi.org/10.3389/fpsyg.2023.1297687>. In this article, PSI is defined as parasocial processing (PSP).

CRedit statement: Michelle Möri: conceptualization, methodology, investigation, data curation, formal analysis, writing (original draft), project administration, funding acquisition. Andreas Fahr: conceptualization, methodology, investigation, writing (review & editing), supervision, funding acquisition.

Open Data: This study's material, code, and supplemental material can be found on OSF: <https://osf.io/yz3rq/>.

Abstract: Similarity between media character and viewer is an important predictor of parasocial interactions. Thereby, similarities are often limited to single characteristics or to the similarities viewers perceive between themselves and characters. This article expands the existing literature in two ways. First, the effects of actual and perceived similarity on parasocial interactions are compared. Second, similarity is understood in a broad way. With age, gender, job, relationship, and living situation are assessed for sociodemographic similarities. Psychological similarities are considered with the Big Five personality traits, loneliness, and self-esteem. The study employs a multimethod design with a field study using tracking data, experience sampling surveys, and content analysis. With the content analysis, characters' characteristics can be indicated independent from the viewers to assess actual similarity in a more objective way. In these everyday viewing settings, parasocial interactions increased with similarities in extraversion and perceived Big Five traits and decreased with similarities in age and conscientiousness. The other assessed similarity types did not influence parasocial interactions. Taken together, the study underlines the importance of differentiating between actual and perceived similarity when analyzing viewer PSI with media characters, and to specify the particular type of similarity.

Keywords: similarity, parasocial interactions, perceived similarity, actual similarity, experience sampling

Introduction

Similarities between media characters and viewers often explain differences in the strengths of parasocial processes, for example, parasocial interactions (PSI). Parasocial interactions describe an audience member's illusion of being in a real social interaction with a media character (Hartmann, 2023). Previous research has shown that various similarities influence parasocial interactions. For example, that viewers experience stronger PSI with characters similar in age or gender (Bui, 2017), or similarity in attitudes positively influences their PSI with influencers (Sokolova and Kefi, 2020). Given its importance, it is crucial to understand how similarity is defined in parasocial research: some studies focus only on single characteristics (Greenwood et al., 2021; Sokolova and Kefi, 2020); others on a general similarity (Su et al., 2023); and others on the similarity media users perceive toward the character (Stein et al., 2022; Ye et al., 2021). However, when focusing on single characteristics (e.g., only attitude similarity), it remains unclear if viewers focus on exactly this chosen characteristic for their feeling of similarity. For example, the role of similarity is analyzed by comparing viewers' age with the character's age, and the influence of this (dis)similarity on PSI is assessed, without considering other possible similar characteristics between viewer and character (Bui, 2017). When similarity is defined as "general similarity", a variety of different approaches are used so that behind the same term, different concepts can be hidden. For example, general similarity can mean similar ideas, values, attitudes, preferences or interests (Su et al., 2023). For perceived similarity, only the viewers' perception is considered, for example, by asking viewers how similar they perceive themselves to an influencer (Stein et al., 2022) or a spokesperson (Ye et al., 2021). Whether viewers and media characters really are similar is not taken into account. This variety in approaches to define and measure similarity makes generalizing the results difficult. Taken together, these different methodological approaches show that comparability of results for the role of similarity in parasocial research

becomes more difficult. It underlines the importance of considering these definitions when interpreting the results, as behind the term “similarity,” different ideas can be covered.

Studies on social interactions show that differentiation between *actual* and *perceived* similarity is essential because they can have different effects (Montoya et al., 2008). Actual similarity is defined as the extent to which two individuals share the same characteristics. Perceived similarity describes the extent an individual perceives another person as similar (Wortman et al., 2014). Studies comparing actual and perceived similarity showed a stronger effect of perceived similarity on attraction and on liking than actual similarity (Hampton et al., 2019; Montoya et al., 2008). However, in short interactions between individuals, actual similarity was shown to be essential for the individual’s processing, such as liking or attraction (Montoya et al., 2008). These results underline the importance of differentiating actual and perceived similarity. As a lot of parasocial research derives theoretical assumptions from research about social interactions and relationships, deriving this differentiation to mediated research offers a more nuanced perspective on similarity.

In mediated settings, this distinction between actual and perceived similarity is seldomly made (for exceptions, see Cohen and Hershman-Shitrit, 2017; Webster and Campbell, 2022), and thus, forms a research gap in similarity research in the context of viewers’ PSI with media characters. Based on the research on social interactions, the effects from actual and perceived similarity should be analyzed and compared for viewer PSI with characters. Thus, this research gap is tackled. In a pre-study, the role of actual similarity between viewers and media characters for viewer PSI is tested. As research in social interactions shows that actual similarity was important for individuals’ processing of the encounter (Montoya et al., 2008), it seems worthwhile focusing on actual similarity in the mediated context. However, assessing actual similarity in these mediated settings is challenging. Viewer-perceived similarity can easily be measured by asking participants about how similar they perceive themselves to the media

character. Actual similarity needs to be independent from viewers self-assessment, and requires a more objective analysis of media characters sociodemographic or psychological traits to compare them with the self-assessment of viewers.

In this study, actual and perceived similarity are assessed, and the effects of actual and perceived similarity on PSI are compared to integrate this approach of both types of similarities stemming from psychological research also in the mediated setting. Thereby, actual similarity is assessed by independent coders in a content analysis to have a more objective similarity evaluation than viewers' self-assessment of similarity. The article's overarching research question is:

RQ. How do actual and viewer-perceived similarities between media characters and audience members relate to parasocial interactions?

Viewers' Parasocial Interactions with Media Characters

Media research has frequently examined how media users connect with, react to, and interact with characters they know through media exposure. Parasocial research broadly focuses on different aspects of viewers' broad processing of a mediated encounter with a media character. Thereby, PSI describes one specific aspect, differentiating it from other concepts like parasocial relationships or viewers' identification (Giles, 2023). PSI are restricted to media exposure and defined as an intuitive feeling of mutual awareness, attention, and adjustment with a mediated character (Hartmann, 2023). Viewer PSI is important, as parasocial interactions are crucial for enjoyment and entertainment (Klimmt et al., 2006), or viewers' information processing and persuasive effects (Rosaen et al., 2019). When viewers interact parasocially, they experience the illusion of being in a real social interaction (Dibble et al., 2023). Due to this illusion, a lot of researchers argue with the theoretical background from social interactions and borrow concepts from social interactions research (Klimmt et al., 2006). For example, traits important in social interactions, such as loneliness, were also analyzed in PSI (Lim and Kim,

2011; Rubin et al., 1985). The influence of similarity on social interactions is adapted to the mediated settings with PSI as interactions between viewers and media characters. Following that, several studies focus on the role of similarity in PSI (Liebers and Schramm, 2019; Schramm et al., 2022). For example, a study showed that perceived similarity with a spokesperson on social media increased customer PSI, which in turn, increased their brand identification (Ye et al., 2021). In another study, similarity was shown to increase viewer PSI with a spokesperson in a public service announcement about obesity. PSI, in turn, increased their intention to adapt their diet and exercise (Phua, 2016). Thus, empirical findings show that similarity can increase PSI, which then possibly impacts other forms of viewers' message processing like persuasion or entertainment.

PSI is a crucial concept in viewers' processing of mediated encounters with characters. Understanding viewers' PSI is important, as PSI has been shown to be essential to viewer entertainment experiences, to persuasion, or to viewers' message processing (Dibble et al., 2023; Klimmt et al., 2006). Thus, exploring possible predictors of viewer PSI is important to better understand their processing of mediated encounters with characters that are prevalent in all kinds of media productions.

Actual and Viewer-Perceived Similarity in Parasocial Interactions

Similarity is an essential predictor of the quality and quantity of social interactions, and the similarity effect is considered the most robust effect in the behavioral sciences (Layton and Insko, 1974). The similarity-attraction hypothesis describes the role of similarity in social interactions and its effects on attraction (Byrne, 1997). It was assumed that individuals sharing similar physical characteristics are generally attracted to each other and that this similarity is thus important for social interactions and relationships (Byrne, 1997). Researchers in psychology distinguish between *actual* and *perceived* similarities (Montoya et al., 2008). Actual similarity has been shown to be important for social interactions and relationships, such as

accurately predicting friendship initiation and interactions (AhYun, 2002). A meta-analysis showed that actual similarity was especially important for attraction in short-term interactions, while perceived similarity was important in short-interaction and in existing relationships (Montoya et al., 2008). This underlines that differentiation is necessary, as both concepts are important in other aspects of social interactions and relationships. As in social interactions, both types of similarities are essential, it raises the question about their role in PSI.

The differentiation between actual and perceived similarity is seldom made in media research (for exceptions, see Cohen and Hershman-Shitrit, 2017; Webster and Campbell, 2022), although the assumption that similarity is essential was adapted from social interactions (Greenwood and Aldoukhov, 2023; Klimmt et al., 2006). As research in social interactions shows that actual and perceived similarity can influence different aspects of interactions, it is important to integrate this differentiation also in the mediated context, as they can possibly have different effects on PSI. Most studies analyzing similarity as a predictor of parasocial processes focus on viewer-perceived similarities (Jhavar et al., 2023; Ye et al., 2021). With this approach, it remains open if viewers only perceive them to be similar while being dissimilar. Some studies manipulate similarity based on single characteristics (Hoeken et al., 2016; Igartua and Fiuza, 2018), which approaches actual similarity. With only one similar characteristic, many other characteristics can differ.

To overcome these limitations, two adaptations are made in this study. First, the approach of actual similarity from psychological research is applied to the mediated setting as “objective” similarity. The effects of perceived and actual similarity on PSI are compared. In the study, viewers are asked about how similar they perceive themselves to media characters, and the similarity is additionally assessed in a more objective way to analyze actual similarity. Thus, the effects of both similarity types on PSI can be compared. Second, the similarity is not only

limited to a single type of similarity (e.g., gender similarity), but is expanded to several similarity types covering sociodemographic and psychological similarities.

The Role of Demographic Similarities in Parasocial Interactions

Similarity is an important predictor of viewer PSI with media characters. Often, it is analyzed viewer-perceived similarities between themselves and the character, which has been shown to increase viewer PSI in several studies, for example, with virtual influencers (Sokolova and Kefi, 2020; Su et al., 2023), with testimonials (Phua, 2016), or with characters in television (Greenwood et al., 2021). Thereby, several studies focus on demographic similarities, for example, the same gender or the same job. As demographic similarity can consist of different attributes (e.g., age, ethnicity) other studies focus on single characteristics describing a specific type of demographic similarity instead of taking all these characteristics together. For example, for shared gender (Bui, 2017; Hoffner, 1996), similarity in age (Bui, 2017), or similarity regarding ethnicity (Fu et al., 2019; Pan and Zeng, 2018), a positive influence on PSI was found. These studies show that different demographic similarities—a general demographic similarity, a perceived similarity, or specific types of demographic similarities—positively influence PSI.

Based on these studies, we expand the analysis of specific types of demographic similarities as predictors for viewer PSI. The influence of similarity in gender and age is retested, and the demographic similarity is further expanded to job, living situation, and relationship status. These additional demographic characteristics were chosen for two reasons. First, these five characteristics are generally essential characteristics for similarity (McPherson et al., 2001), and they are often used in research on parasociality (Liebers and Schramm, 2019). To our knowledge, only the characteristics themselves and their role in PSI (e.g., do singles or married people differ in their PSI?) were analyzed, and not the similarity regarding the relationship status between viewer and media character (e.g., do singles experience stronger PSI with characters also being single than with married characters).

Second, for other forms of viewers' engagement with characters, these types of similarities were shown to be important. For example, other studies analyzed the influence of job similarity (Hoeken et al., 2016) or of living situation similarity (de Graaf, 2014) on identification. Identification–viewer adaption to a character's perspective (Cohen, 2001)—differs from PSI, as in identification, viewers merge with the character, and while parasocially interacting, they remain aware of themselves (Dibble et al., 2023). Both concepts describe some sort of viewer engagement with characters (Brown, 2015), so it is worthwhile to retest them for PSI.

By analyzing different specific types of sociodemographic similarity with age, gender, job, living situation and relationship status, this study expands existing research that often focuses on a general sociodemographic similarity or on one single sociodemographic characteristic. Of course, the selection of sociodemographic characteristics with gender, age, job, living situation, and relationship status is non-exhaustive but covers relevant sociodemographic characteristics.

H1. Viewers with actual and viewer-perceived demographic backgrounds similar to the media character experience stronger *parasocial interaction* than viewers with different demographic backgrounds.

The Role of Psychological Similarity in Parasocial Interactions

Besides sociodemographic factors, psychological factors are important for people's feeling of similarity in social interactions. For example, personality similarity in the Big Five was shown to result in better initial interaction between two individuals who do not know each other than personality dissimilarity (Cuperman and Ickes, 2009). In social interactions, similarity in personality traits increases the attraction of the interaction partner (Klohnen and Luo, 2003). In a more long-term perspective, similarity in personality traits influenced the partners' perception of their relationship quality (Decuyper et al., 2012; Gonzaga et al., 2007).

These findings show that besides sociodemographics, similarities in traits like the Big Five or other psychological similarities are important in social interactions.

Even though a lot of research on PSI explains the relevance of similarity based on research in social psychology (Klimmt et al., 2006), the role of psychological similarity in mediated encounters is seldom analyzed. One of these studies differentiates between external and internal similarities, with internal similarities as a type of psychological similarity. Both types of similarities had positive effects on PSI, but the effect of internal similarity was stronger than the effect of external similarity (Fu et al., 2019). An example of similarity in a specific psychological trait analyzed with viewers and characters is a study focusing on the Big Five. It showed different effects for the similarity in the basic personality traits (John et al., 2008) and their influence on PSI (Cohen and Hershman-Shitrit, 2017).

The research on psychological similarities in social interactions and the results of the studies about psychological similarities with media characters underline the importance of psychological similarities in social and parasocial interactions. With that comes the need to consider psychological similarities for viewer PSI. In this study, three specific types of psychological similarities and their influence on viewer PSI are analyzed. The selection of the specific psychological traits is explained in the following. Of course, the selection is non-exhaustive but serves as a first step to further explore the relationship between psychological similarities and PSI.

As the first psychological trait to assess the similarity between viewers and media characters, and the influence of this similarity on PSI, the *Big Five* personality traits were chosen. The Big Five consists of openness, conscientiousness, extraversion, agreeableness, and neuroticism (John et al., 2008). They are basic traits used in a lot of research in psychology and in the mediated setting (John et al., 2008). The similarity in the Big Five and its effect on social interactions (Humberg et al., 2023), and in PSI (Cohen and Hershman-Shitrit, 2017) was

analyzed in some studies. In the mediated setting, characters from three TV shows were used. The results showed that perceived similarity in the Big Five influenced viewer PSI in the domains of extraversion, conscientiousness, and openness (Cohen and Hershman-Shitrit, 2017). In this study, this relationship is retested with a bigger variety of media characters and with surveys directly after viewers' media use.

The second chosen personality trait was the viewers' and the media characters' *loneliness*. Viewer's loneliness is often analyzed in the context of PSI (Lim and Kim, 2011; Wang et al., 2008). Researchers often assumed that lonely people compensate for their lack of interpersonal contact with parasocial encounters, but negative or mixed results were found (Rubin et al., 1985; Vorderer and Knobloch, 1996). In this study, the analysis is expanded to the similarity in loneliness between viewer and character, and the role of this similarity in PSI—based on similar research for the role of loneliness similarity in social interactions (Humberg et al., 2023). For example, we want to explore if lonely people experience stronger PSI with a character portrayed as lonely than with a character portrayed as always being around other people.

Third, similarity in *self-esteem* was chosen as a possible predictor for PSI. Self-esteem is another characteristic examined as a predictor of parasocial processes, as it influences how people interact with others (Rosenberg, 1965). In social interactions, an individual's self-esteem influences their behavior (Burgoon, 1976; McCroskey et al., 1977). In the mediated setting, Turner (Turner, 1993) showed that viewer self-esteem influences PSI. To our knowledge, there is no research analyzing viewers' and characters' similarity in self-esteem on PSI. We want to explore, for example, if viewers with low self-esteem experience stronger PSI with characters also low in self-esteem than with characters with strong self-esteem.

The Big Five (Jackson et al., 2010; Tidwell et al., 2013), loneliness (Mund and Johnson, 2021; Stevens and Westerhof, 2006), and self-esteem (Erol and Orth, 2016, 2014) similarities

have been examined in the context of social interactions but not in mediated encounters (Cohen and Hershman-Shitrit, 2017; Webster and Campbell, 2022). They were chosen as these psychological traits are often analyzed in parasocial research. But the similarity between viewer and characters in these traits is seldomly done in the mediated setting, offering a research gap. However, this selection of psychological similarities is not exhaustive, and other characteristics could be important as well. As we cannot derive directed hypotheses for the mediated setting, we formulated the research question:

RQ2. How do actual and viewer-perceived similarities between media characters and viewers concerning (a) the Big Five, (b) loneliness, and (c) the level of self-esteem relate to the strength of parasocial interaction?

Materials and Methods

Research Design and Procedure

A multimethod design assessed the association between similarity for viewers, characters, and PSI. To be as close as possible to participants' everyday media use, and avoid creating a superficial media use situation, a field study was conducted. This increases the study's external validity. In this field study, participants' Netflix use was tracked using a Google Chrome browser extension (Cordeiro et al., 2021). Netflix was chosen as a streaming platform, as a lot of viewers consume media content online and on-demand (Jenner, 2014). The browser extension allows combining usage tracking with survey data. When participants exit Netflix, in a pop-up window, a survey opens, and their thoughts about the previous media use can be assessed directly after watching, avoiding possible memory biases.

Possible participants received information about the study and the use of their data. After signing informed consent, participants installed the browser extension. Then, they completed a general survey that assessed demographics, Big Five, loneliness, and self-esteem. Participants only had to complete this survey once at the beginning of data collection. During the following

two weeks—always after exiting Netflix—the participants completed a short survey. In this postsession survey, they were asked to select a character from the previously watched content. To generate variance in PSI, they were asked to indicate the participant they thought about the most. This includes liked and disliked media characters and does not limit the selection of media characters to specific types, e.g., protagonists. In each viewing session during these two weeks, participants could choose another media character. After indicating the name, the participants' PSI with and their perceived similarity to this character were assessed. The study was conducted as part of a larger study (see <https://osf.io/ceb9n/>).

To assess the personality traits of the media characters independent of the study's participants, a content analysis was conducted. Using the tracking data, information about the watched content was extracted (e.g., series and episode title) and supplemented with the name of the character in the postsession survey. Two coders analyzed the characters the participants chose following a codebook. They indicated the media characters' age, gender, job, relationship status, living situation, Big Five personality traits, loneliness, and self-esteem. Finally, the data from the usage tracking (what content did they watch?), the postsession surveys (name of the media character, viewer PSI), and the content analysis (media character's personality traits) were combined into one single data set. The institutional review board of the University of Fribourg approved the study design.

Pre-study

First, a pre-study was conducted to test the multimethod design to assess the association between similarity for viewers, characters, and PSI in an everyday viewing setting (for more details of the methods, see the following chapters of the main study). To do so, the use of Netflix by 80 participants between 18 and 54 years old ($M=24.11$, $SD=8.86$) with 69% females was tracked for two weeks. After each use, they answered a short survey to assess their PSI with a media character. Participants' personality traits were assessed in a survey at the beginning of

data collection. Coders assessed the media character's personality traits in a content analysis. With these data, an objectively measured similarity could be assessed. All details of the pre-study are on OSF: <https://osf.io/yz3rq/>.

For the pre-study, 425 sessions lasting at least 10 minutes were tracked. A total of 186 surveys were completed, of which, 156 were completed within the one-hour post-viewing time limit. 16 viewing sessions had to be excluded because participants indicated that no characters were relevant. Character choice was required to answer questions about PSI, and thus, sessions without a character had to be excluded. Finally, the data set consisted of 61 participants, with 140 using sessions with a selected character.

All items were measured with five-point Likert scales (1 "do not agree at all", 5 "fully agree"). Participants' personality traits were assessed in the survey: loneliness ($M=1.44$, $SD=.45$, $\alpha=.82$; Russell et al., 1980), self-esteem ($M=3.91$, $SD=.56$, $\alpha=.81$; Rosenberg, 1965), Big Five (Rammstedt and John, 2005): extraversion ($M=3.65$, $SD=1.17$), agreeableness ($M=4.28$, $SD=.77$), conscientiousness ($M=4.06$, $SD=.97$), neuroticism ($M=2.59$, $SD=1.29$), and openness ($M=3.90$, $SD=1.27$). In the post-session survey, viewer PSI ($M=1.21$, $SD=.43$, $\alpha=.75$) was assessed with the Experience of Parasocial Interaction scale (EPSI; Hartmann & Goldhoorn, 2011).

Characters' sociodemographics and personality traits were assessed by two coders following a codebook (see 7.1.5 content analysis). Viewers' loneliness ($M=2.99$, $SD=1.01$, $\alpha=.96$), self-esteem ($M=3.81$, $SD=.65$, $\alpha=.95$) Big Five: extraversion ($M=3.50$, $SD=1.18$), agreeableness ($M=2.93$, $SD=1.08$), conscientiousness ($M=3.77$, $SD=.93$), neuroticism ($M=2.70$, $SD=1.05$), and openness ($M=3.49$, $SD=.90$) were assessed each in one category based on the items used in the surveys. The reliability test of ten randomly selected cases showed satisfactory results: the averages over all items for each category are for sociodemographic $\alpha = 1$, Big Five $\alpha = .780$, loneliness $\alpha = .857$, and self-esteem $\alpha = .797$ (for all single items on OSF).

Based on viewers' self-assessment in the surveys, and coders' assessment of the characters, similarity scores were calculated. The results (see OSF for more details) showed only one significant predictor for PSI. Viewers rated as similar in extraversion experienced stronger PSI than viewers dissimilar in extraversion to the character.

The pre-study disclosed two points that needed to be considered in the main study. First, only actual similarity was analyzed. It could be assumed that actual similarity cannot create the sort of intimacy that is crucial for PSI (Klimmt et al., 2006). The interpretation was limited without information about participant-perceived similarities; thus, it is unclear whether viewers did not feel similar or felt similar despite being objectively dissimilar.

Second, the EPSI scale used was not ideal in the study setting. The scale was developed for a TV host addressing viewers through verbal or physical cues (Hartmann and Goldhoorn, 2011). In this study, participants watched content on Netflix wherever they wanted and interacted with various characters. In these self-directed viewing sessions, the PSI intensities were very low (EPSI, $M=1.21$, $SD=.43$).

The use of the multimethod design was proven to be useful in the pre-study. However, the limitations of the pre-study led to the additional assessment of viewer-perceived similarity in the main study, and the use of another scale to assess viewer PSI to increase the validity of the main study.

Participants

For the main study, 100 individuals with access to Netflix were recruited at the University of Fribourg. The participants were between 18 and 38 years old ($M=23.14$, $SD=4.13$), with 81% identifying themselves as female, 17% as male, and 1% as nonbinary. Students (45%) and part-time employees (40%) accounted for the largest portion of the sample. Most participants (97%) were single.

Usage Tracking and Survey Data

In total, 693 viewing sessions of 94 participants were tracked. Sessions were excluded when the survey was completed too late (>1 hour after watching, $n=40$), sessions lasted less than 10 minutes ($n=28$), or viewers did not choose a character due to a lack of relevant characters ($n=203$). During content analysis, additional sessions were excluded ($n=40$) for several reasons, such as when the named character did not match the watched content, the character was nonspecific (e.g., “the girl”), or several characters were named (e.g., Ginny and Georgia). These exclusions resulted in a final sample of 317 sessions of 91 participants.

Measures

Unless otherwise mentioned, all items were measured using a five-point Likert-type scale ranging from 1 (“do not agree at all”) to 5 (“fully agree”). The full scales are on OSF.

Loneliness

Participant loneliness levels ($M=1.64$, $SD=.66$, $\alpha=.88$) were assessed with six items of the revised UCLA Loneliness Scale (e.g., “I feel left out”; Russell et al., 1980).

Self-esteem

Participant self-esteem levels ($M=3.60$, $SD=.79$, $\alpha=.90$) were measured using 10 items (e.g., “I wish I could have more respect for myself”; Rosenberg, 1965).

Big Five

Each participant’s personality profile was assessed using one item of the German short form of the Big Five Inventory scale for each of the five dimensions (Rammstedt and John, 2005): extraversion, $M=3.67$, $SD=1.06$; agreeableness, $M=3.26$, $SD=1.06$; conscientiousness, $M=4.08$, $SD=.73$; neuroticism, $M=3.36$, $SD=1.13$; and openness, $M=3.67$, $SD=1.30$). The use of single-item measures is common in experience sampling studies and was proven to result in valid measurements in other studies (Allen et al., 2022; Matthews et al., 2022).

PSIs

Viewer PSI was measured using six items from the PSI-Process scale (Schramm and Hartmann, 2008), which measures viewer PSI ($M=2.58$, $SD=.87$, $\alpha=.72$), defined as the “degree to which the individual interacts psychologically with a media character” (p. 388). The scale is applicable to a variety of media characters, and applicable also in these self-directed and everyday viewing sessions.

Perceived Similarity

To compare perceived and actual similarity, participants were asked to indicate in the postsession survey how similar they perceived themselves to be to the character. Viewers self-assessing their similarity to the character is based on other research in parasocial research (Fu et al., 2019; Stein et al., 2022). As in these studies, only a general perceived similarity was assessed, we formulated own items for each type of perceived similarity: sociodemographic similarity ($M=1.93$, $SD=1.19$), Big Five ($M=2.63$, $SD=1.24$), loneliness ($M=2.40$, $SD=1.27$), and self-esteem ($M=2.81$, $SD=1.22$). For example, to assess viewer-perceived similarity in self-esteem, participants indicated how much the statement “Character and I are very similar in terms of our level of self-esteem” applied to them. The participants were instructed about how they can get more information about terms they might not understand (e.g., conscientiousness), and could move the mouse in the online survey on the word, and in a pop-up box a short explanation appeared to make it easier for them to answer the questions.

Content Analysis

The content analysis sample was determined by the characters chosen in the 140 postsession surveys. Four further sessions were excluded because the chosen characters did not match the watched content ($n=136$, e.g., a participant watched *The Big Bang Theory* and named James Bond in the postsession survey). Two coders assessed the chosen characters following a

codebook (<https://bit.ly/3j5BRaK>) and according to the *state of play* indicated by the watched episode. Characters evolve during a series, potentially over long periods of the characters' lives. For example, in the first episode of *Gilmore Girls*, Rory is coded as a shy 16-year-old student. In the last episode of the final season, Rory is coded as an outgoing young woman starting her career.

The items from the surveys were used as categories in the content analysis. The coders rated the items' appropriateness for the character from 1 ("not applicable at all") to 5 ("totally applicable"). For example, they indicated whether the sentence "There are people who really understand CHARACTER" applied to assess the character's loneliness.

For ten randomly selected cases, intercoder reliability was calculated with Krippendorff's $\alpha \geq .667$ (Krippendorff, 2004). The reliability test showed satisfactory results: the averages over all items for each category are for sociodemographic $\alpha = .99$, Big Five $\alpha = .803$, loneliness $\alpha = .816$, and self-esteem $\alpha = .741$ (more detailed on OSF).

Sociodemographics

Each character's gender (male/female/non-binary), age (in 10-year increments), job (employed, unemployed, student/training), living situation (alone, with a partner, in a shared apartment, with family), and relationship status (single, married, divorced, widowed) was assessed. An additional option ("does not apply") was eligible for all variables. For example, some fictional characters do not have ordinary jobs, and characters in prison do not match the listed living situations.

Loneliness

Character loneliness ($M=2.66$, $SD=.92$, $\alpha=.94$) was assessed based on six items from the UCLA Loneliness Scale (Russell et al., 1980).

Self-esteem

Character self-esteem ($M=3.69$, $SD=.98$, $\alpha=.95$) was assessed using the Rosenberg Self-Esteem Scale (Rosenberg, 1965).

Big Five

Each character's personality profile was assessed using one item of the German short form of the Big Five Inventory scale for each of the five dimensions (Rammstedt and John, 2005): extraversion ($M=3.61$, $SD=1.18$), agreeableness ($M=3.21$, $SD=1.25$), conscientiousness ($M=3.87$, $SD=1.07$), neuroticism ($M=2.61$, $SD=1.07$), and openness ($M=3.71$, $SD=1.09$).

Similarity between Audiences and Media Characters

For the sociodemographic variables and the Big Five, similarity scores were calculated by adding one point if character and viewer matched (e.g., same gender) and zero points if they did not match.

For loneliness and self-esteem, similarity was calculated by subtracting the character value from the participant value for each item. The absolute values of those similarity scores were then used to build a mean index for all items (6 items for loneliness and 10 items for self-esteem). These overall similarity indices were recoded from 0 ("very dissimilar") to 4 ("very similar").

Adding up the different similarity scores was modeled on the procedure used in studies of actual similarity in personal interactions and relationships (e.g., Tidwell et al., 2013; van Zalk & Denissen, 2015). Both similarity scores relied on viewers rating their demographics and characteristics in the same manner as the coders who rated character demographics and characteristics. In both cases, measurement invariance exists, so we refrained from considering a score of 4 as "completely similar." As participants' self-assessment of their

sociodemographics and personality traits were used, we refrained from calling it “actual” similarity, as the measurements are not free from subjective influences.

Results

Participants engaged in one to 23 viewing sessions ($M=3.98$, $SD=3.95$). Multilevel regressions were calculated using the R package *lme4*. The null models showed that PSI ($ICC=48\%$) depended to a significant extent on the viewing session and, thus, possibly on the characters.

To test H1, a multilevel model was calculated using demographic similarity scores (Table 1). Viewers with a similar age experienced weaker PSI ($\beta=-.28$, $SE=.11$, $p=.010$), but viewers with a similar relationship status experienced stronger PSI ($\beta=.30$, $SE=.10$, $p=.003$). Similarities in gender, job, or living situation did not influence PSI. Viewers’ perceived demographic similarity also did not influence their PSI. Thus, H1 was confirmed for relationship similarity. For the other actual similarities and perceived similarity, H1 was rejected. Compared to the null model, the demographic similarities only explained $R^2_1 = .002$ variance in PSI (Snijders and Bosker, 2012).

Table 1*The influence of demographic similarities on parasocial interactions.*

Predictors	parasocial interactions		
	Est.	SE	p
Intercept	3.47	.12	<.001
age similarity	-.28	.11	.010
gender similarity	.02	.08	.817
relationship similarity	.30	.10	.003
job similarity	-.02	.11	.838
living situation similarity	.16	.13	.219
perceived demographic similarity	.06	.04	.151
Random Effects			
σ^2		.27	
τ_{00}		.24	User

Note: Actual similarities: 0 = dissimilar, 1 = similar. Perceived similarity: 0 = dissimilar to 5 = similar. $N = 78$ participants with 233 viewing sessions. R^2_1 (R-square of level 1 predictors following Snijders and Bosker (2012)) = 0.002.

RQ2 was tested with a multilevel model using all psychological similarities (Table 2). Regarding the Big Five similarities, different patterns emerged for the five dimensions. Viewers with actual extraversion similarity ($\beta=.23$, $SE=.09$, $p=.015$) experienced stronger PSI, whereas viewers with actual conscientiousness similarity ($\beta=-.20$, $SE=.08$, $p=.019$) indicated lower PSI. The perceived similarity regarding the Big Five positively influenced their PSI ($\beta=.08$, $SE=.04$, $p=.039$). To answer RQ2a, the degree to which viewers perceived themselves to be similar to the character significantly increased their PSI. Regarding actual similarity, differences emerged for the five domains, with extraversion similarity increasing PSI and conscientiousness similarity decreasing PSI.

Regarding RQ2b for loneliness, actual similarity ($\beta=-.09$, $SE=.05$, $p=.092$), and the perceived loneliness similarity both did not influence the degree of viewer PSI ($\beta=-.01$, $SE=.04$, $p=.736$). The same was found for RQ2c for self-esteem. Actual assessed similarity ($\beta=-.01$, $SE=.07$, $p=.877$) and perceived self-esteem similarity both did not influence PSI ($\beta=.02$,

$SE=.04, p=.532$). Compared to the null model, the psychological similarities explained $R^2_1 = .04$ variance in PSI (Snijders and Bosker, 2012).

Table 2

The influence of psychological similarities on parasocial interactions.

Predictors	parasocial interactions		
	Est.	SE	p
Intercept	3.76	.23	<.001
extraversion similarity	.23	.09	.015
agreeableness similarity	.08	.09	.397
conscientiousness similarity	-.20	.08	.019
neuroticism similarity	-.06	.08	.471
openness similarity	.00	.08	.953
perceived personality similarity	.08	.04	.039
loneliness similarity	-.09	.05	.092
perceived similarity in loneliness	-.01	.04	.736
self-esteem similarity	-.01	.07	.877
perceived similarity in self-esteem	.02	.04	.532
Random Effects			
σ^2		.25	
τ_{00}		.26	User

Note: Actual similarities: 0 = dissimilar, 1 = similar. Perceived similarity: 0 = dissimilar to 5 = similar. $N = 84$ participants with 296 viewing sessions. R^2_1 (R-square of level 1 predictors following Snijders and Bosker (2012)) = 0.04.

Discussion

Similarity between viewers and media characters has been examined frequently in research on PSI (Bui, 2017; Phua, 2016). To expand this literature, this study applies an approach that differentiates actual and perceived similarity in a mediated setting (Montoya et al., 2008). Existing research often focuses on single characteristics (Greenwood et al., 2021; Sokolova and Kefi, 2020) or a general similarity (Su et al., 2023) between viewers and characters. This study broadly covered similarities by including different sociodemographic and

psychological similarities. Furthermore, viewers' media use was analyzed in everyday viewing settings, resulting in high external validity. By comparing the effects of actual similarity and perceived similarity broadens the existing literature about similarity in mediated interactions. Taken together, the results of our study underline the need to apply a nuanced approach to analyses of similarity by differentiating between similarity types (e.g., sociodemographic, psychological) and between the similarities viewers perceive and actual similarities to better cover the concept of similarity.

For viewers' similarity with the media characters, their perceived demographic similarity did not influence PSI. However, actual relationship similarity increased PSI, whereas actual age similarity decreased it. This contradicts another study that found a positive effect between age similarity and viewer PSI with their favorite celebrities (Bui, 2017). In our study, viewers indicated their PSI with mostly fictional characters on Netflix. It is possible that age and sociodemographic similarities are less important with fictional characters than with real people (Hartmann and Hofer, 2021). Overall, these findings challenge existing literature, as mostly, similar demographic background did not increase viewer PSI in these everyday viewing settings. Possibly, in everyday self-directed viewing sessions, similarity is less important for viewer PSI than, for example, in a single exposure situation with a public service announcement.

Several studies on social interactions (Cuperman and Ickes, 2009; Klohnen and Luo, 2003) and one study on mediated encounters (Fu et al., 2019) showed the importance of psychological similarity. This assumption was retested in the mediated setting. For the Big Five, actual similar viewers in extraversion experienced stronger PSI. In the context of mostly fictional Netflix content, character extraversion might be prevalent. As a result, this personality trait is obvious to the viewers, and similarity in extraversion, thus, relevant for viewer PSI. Viewers similar in conscientiousness indicated lower PSI, which might mean that viewers with

high conscientiousness like to engage with dissimilar characters to escape from their familiar everyday lives.

Regarding loneliness and self-esteem similarity, no effect of actual and perceived similarity was found. In social interactions, the positive effect of psychological similarity on interactions was mainly proven in hypothetical settings (Montoya et al., 2008). In real-life social interactions, several studies do not find evidence for an influence of psychological similarity on social interactions (Asendorpf et al., 2011; Luo and Zhang, 2009; Tidwell et al., 2013). Viewers' interactions with characters come closer to hypothetical interactions, as they are one-sided and take place in a limited setting (Hartmann and Goldhoorn, 2011), aligning with these results of social interactions.

By comparing the actual and perceived similarities between viewers and characters, this study expands the existing literature. Only perceived Big Five similarities positively influenced viewer PSI. This result aligns with existing findings in the mediated settings (Cohen and Hershman-Shitrit, 2017). The additionally analyzed perceived similarities in sociodemographics, loneliness, and self-esteem did not influence PSI. One explanation is that perceived similarity was important in existing relationships of individuals, whereas actual similarity was only important in short-term interactions (Montoya et al., 2008). Following this reasoning, perceived similarity would be essential for parasocial relationships—viewers' long-term psychological involvement with a character (Dibble et al., 2023)—but not for the short-term oriented PSI (Hartmann, 2023).

It is important to also consider the relationship between actual and perceived similarity. Cohen and Hershmann-Shitrit (2017) showed that these two measurements can differ, and so do their effects. Therefore, the measurement of both types of similarity is essential. The items to assess viewer-perceived similarity were based on other studies in parasocial research (e.g., Fu et al., 2019; Stein et al., 2022) but adapted to the specific types of similarity assessed in this

study, e.g., demographic or loneliness similarity. These author-developed items are somehow limited, as in one item, several comparisons are covered. For example, viewers indicated in only one item if they perceive themselves to be similar to the character regarding the personality traits that cover openness, extraversion, neuroticism, agreeableness, and conscientiousness. If viewers perceive themselves as similar in extraversion but not in openness, it is hard to answer this item, and the validity of the measurement can be questioned. Thus, the lack of influence of viewer-perceived similarity on parasocial interactions needs to be interpreted with caution. It is possible that the measurement used in the study was not able to capture viewers' feelings of similarity, and thus, the lack of significant findings represents an inadequate measurement rather than a lack of influence. In future studies, it would be important to improve this similarity measurement. For example, by letting viewer evaluate their perceived similarity in the Big Five for each of the five dimensions separately.

Taken together, this study adds to the existing literature in several ways. First, it provides new empirical findings for the relationship between actual and perceived similarity and their influence on PSI. The assessment of both types of similarities follows the approach of research in social interactions in the mediated setting. Second, the different results for similarity in the Big Five confirm existing results (Cohen and Hershman-Shitrit, 2017) and underline that only actual similarity increases viewer PSI but not perceived similarity. This finding challenges other studies' findings that only focused on viewer-perceived similarity and concluded that similarity is unimportant for PSI. Our study's result can provide an explanation for different findings when experimentally creating an actual similarity (e.g., by choosing a protagonist with the same gender) or when asking viewers about their perceived similarity.

The findings suggest some adaptations in future research about similarity in mediated interactions between viewers and media characters. In future studies, it should be either clearly labeled what type of similarity is assessed (actual vs. perceived). To see if both types of

similarity have the same effects on interactions as shown in research about social interactions (Montoya et al., 2008), both types of similarity should be assessed, and their effects on PSI compared in different mediated settings, for example, with influencers on social media, celebrities in television, or fictional characters in entertainment productions. Thereby, it could be analyzed if this differentiation is important for all interactions or only for specific settings (e.g., social media, television), or only with specific media characters (e.g., real celebrities, fictional characters). For parasocial research overall, future studies about the actual and perceived similarity between viewers and media characters could advance the understanding of how and why viewers interact parasocially with different types of characters in various mediated settings.

Limitations

This study has some limitations. First, actual similarity measurement was not protected against subjective influences because viewer personality traits were collected by self-assessment. If participants did not want to identify as lonely, they might have adapted their self-assessment. Another concern is that participant loneliness and self-esteem were measured only at the beginning of the two weeks of data collection. Future studies might consider assessing viewer states of loneliness and self-esteem at each viewing situation.

Second, this study limited similarity measurements to a non-exhaustive set of characteristics: sociodemographics, the Big Five, loneliness, and self-esteem. Other factors might have been more critical to viewer similarity evaluations than the analyzed characteristics. An individual may share similar physical characteristics with a character but have different values, which might be more relevant to viewer similarity perceptions. The power of media often lies in its ability to create empathy for characters who have experiences that are different from those of viewers (Wong et al., 2017). Individuals are multifaceted, and similarity as a measure might be an oversimplification.

Third, the watched content was not considered. Participants were free to watch whatever, and however much they wanted. This advantage, in terms of external validity, resulted in participants watching various genres. We did not control for genres, usage situations, or attention. Depending on that, different characteristics of the characters might have been prevalent. In a legal drama, moral similarity might be more relevant than in a comedy show. In this study's entertainment context, actual similarity was not important for viewer PSI; however, it might be important in other media types (e.g., news reports).

Fourth, only the viewing sessions of participants who filled in the postsession survey were included in the analysis. This was necessary to gather data about the chosen characters. This resulted in a relatively small sample size, and with that, a rather low power to detect the proposed effects. This rather low power is important to keep in mind when interpreting the null effects of this study. Post-hoc power analyses following Scherbaum and Ferreter (2009) showed that, in general in a multilevel regression, for 100 participants with, on average, three viewing sessions during two weeks, a medium effect ($d = .30$) with a medium variance ($\rho = .1$) would result in a power of 0.66 for this study. To achieve sufficient power ($> .80$) in future studies with a comparable design, either 140 participants would be needed, or the use of 90 participants would need to be tracked for four weeks (more detailed on this issue can be found on OSF). Additionally, in our study, we might have lost data about intense viewing sessions, as intense viewing might have caused viewers to fail to complete the survey because they were too distracted. A more extended period of tracking data would facilitate an analysis of development over time. For example, a viewer's Netflix use might be tracked when a new season of a show featuring their favorite character is released to analyze their PSI after each new episode they watch. Accordingly, the role of similarity might be considered in repeated PSI with the same character (Gleich, 1996).

Conclusion

This study contributes to the existing literature about the role of similarity in viewer PSI in several ways. First, in this mediated setting, the study distinguished between actual and subjective similarity, which research on social interactions has deemed important (Montoya et al., 2008). Second, the study analyzed the role of similarity in the context of viewers' everyday media use through a field study that combined tracking and survey data. Third, similarities were analyzed from a broad perspective, including different demographic and psychological similarities. In everyday viewing situations, viewer PSI increased with extraversion similarity and perceived personality trait similarity but decreased with age and conscientiousness similarities. The other actual and perceived similarity types did not influence viewer PSI. Future studies should specify which type of similarity is being analyzed and in which way similarity is assessed, respecting the difference between actual and subjective measures.

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5.2.1 Article II: Pre-Study

Introduction

The pre-study reported in the main article is reported more extensively in the following subchapters in the supplemental material of this article. The theoretical background is the same as integrated in the main article. In the pre-study, only the actual similarity was assessed, and not the viewer-perceived similarities. Thus, these changes are reflected in the research questions and hypotheses that were analyzed in the pre-study:

RQ. How do objectively measured similarities between media characters and audience members relate to parasocial interactions?

H1. Viewers with demographic backgrounds similar to the media character experience stronger *parasocial interaction* than viewers with different demographic backgrounds.

RQ2. How do similarities between media characters and viewers concerning (a) the Big Five, (b) loneliness, and (c) the level of self-esteem relate to the strength of parasocial interaction?

Methods

Participants

Participants were recruited from [University] from 15 September 2020 to 1 October 2020. Only individuals with access to Netflix were eligible to analyze participants' everyday media use. The 61 final participants were between 18 and 54 years old ($M=24.11$, $SD=8.86$). Of the participants, 69% identified themselves as female and 31% as male. Students (69%) accounted for the largest part of the sample, followed by full-time employees (18%). Most participants (89%) were single.

Usage Tracking and Survey Data

In total, for 80 participants, 425 sessions lasting at least 10 minutes were tracked. A total of 186 surveys were completed, of which, 156 were completed within the one-hour post-viewing time limit. 16 viewing sessions had to be excluded because participants indicated that no characters were relevant in the previous viewing session. Character choice was required to answer questions about PSI, and thus, sessions without a character had to be excluded. Finally, the data set consisted of 61 participants, with 140 using sessions with a selected character.

Measures

Unless otherwise mentioned, all items were measured using a five-point Likert-type scale ranging from 1 (“do not agree at all”) to 5 (“fully agree”). The full scales are on OSF.

Loneliness: Participant loneliness levels ($M=1.44$, $SD=.45$, $\alpha=.82$) were assessed with six items of the revised UCLA Loneliness Scale (e.g., “I feel left out”; Russell et al., 1980).

Self-esteem: Participant self-esteem levels ($M=3.91$, $SD=.56$, $\alpha=.81$) were measured using 10 items (e.g., “I wish I could have more respect for myself”; Rosenberg, 2015).

Big Five: Each participant’s personality profile was assessed using one item of the German short form of the Big Five Inventory scale for each of the five dimensions (Rammstedt & John, 2005): extraversion ($M=3.65$, $SD=1.17$), agreeableness ($M=4.28$, $SD=.77$), conscientiousness ($M=4.06$, $SD=.97$), neuroticism ($M=2.59$, $SD=1.29$), and openness ($M=3.90$, $SD=1.27$). The use of single-item measures is common in experience sampling studies and was proven to result in valid measurements in other studies (Allen et al., 2022; Matthews et al., 2022).

PSIs: After each viewing session, viewers’ PSI ($M=1.21$, $SD=.43$, $\alpha=.75$) were assessed with the Experience of Parasocial Interaction scale (EPSI; Hartmann & Goldhoorn, 2011). One item was chosen for each dimension: mutual awareness, attention, and adjustment (e.g., “CHARACTER knew I was there”).

Content Analysis

The content analysis sample was determined by the characters chosen in the 140 postsession surveys. Four further sessions were excluded because the chosen characters did not match the watched content ($n=136$, e.g., a participant watched *The Big Bang Theory* and named James Bond in the postsession survey). Two coders assessed the chosen characters following the same codebook as in the main study, and according to the *state of play* indicated by the watched episode.

For all characteristics, each category represented one item from the survey rated from 1 (“not applicable at all”) to 5 (“totally applicable”). Intercoder reliability was tested by calculating Krippendorff’s $\alpha \geq .667$ for 10 randomly selected cases (Krippendorff, 2004). The reliability test showed satisfactory results: the averages are for sociodemographic $\alpha = 1$, Big Five $\alpha = .780$, loneliness $\alpha = .857$, and self-esteem $\alpha = .797$ (more detailed on OSF).

Sociodemographics: Each character’s gender (male/female/non-binary), age (in 10-year increments), job (employed, unemployed, student/training), living situation (alone, with a partner, in a shared apartment, with family), and relationship status (single, married, divorced, widowed) was assessed. An additional option (“does not apply”) was eligible for all variables. For example, some fictional characters do not have ordinary jobs, and characters in prison do not match the listed living situations.

Loneliness: Character loneliness ($M=2.99$, $SD=1.01$, $\alpha=.96$) was assessed based on six items from the UCLA Loneliness Scale (Russell et al., 1980).

Self-esteem: Character self-esteem ($M=3.81$, $SD=.65$, $\alpha=.95$) was assessed using the Rosenberg Self-Esteem Scale (Rosenberg, 1965).

Big Five: Each character’s personality profile was assessed using one item of the German short form of the Big Five Inventory scale for each of the five dimensions (Rammstedt & John, 2005): extraversion ($M=3.50$, $SD=1.18$), agreeableness ($M=2.93$, $SD=1.08$),

conscientiousness ($M=3.77$, $SD=.93$), neuroticism ($M=2.70$, $SD=1.05$), and openness ($M=3.49$, $SD=.90$).

Similarity between Viewers and Media Characters

For the sociodemographic variables and the Big Five, similarity scores were calculated by adding one point if character and viewer matched (e.g., same gender) and zero points if they did not match. For loneliness and self-esteem, similarity was calculated by subtracting the character value from the participant value for each item. The absolute values of those similarity scores were then used to build a mean index for all items (6 items for loneliness and 10 items for self-esteem). These overall similarity indices were recoded from 0 (“very dissimilar”) to 4 (“very similar”).

Results

Multilevel analyses were conducted, with participant data at level 2 and session data at level 1. Participants engaged in one to eight viewing sessions ($M=2.61$, $SD=1.88$). Multilevel regressions were calculated using the R package *lme4*. The intraclass correlation coefficients (ICC) of the null model showed that PSI (ICC=68%) strongly depended on the participants and did not vary much between different viewing sessions of the same participant.

To test H1, a multilevel model was calculated using the similarity scores for age, gender, relationship, living, and job situation as independent variables (Table 1). All of the analyzed sociodemographic predictors did not relate to PSI; thus, H1 was rejected.

To answer RQ2a–c, one model was calculated using the Big Five, loneliness, and self-esteem similarities as independent variables (Table 2). Regarding the Big Five, viewers rated as similar in extraversion experienced stronger PSI ($\beta=.19$, $SE=.10$, $p=.063$) than viewers dissimilar in extraversion to the character. No significant effect of similarity on PSI emerged for loneliness or self-esteem. Overall, the Big Five, loneliness, and self-esteem similarities did

not influence viewers' PSI. The only exception was extraversion similarity, which increased PSI.

Discussion and Limitations

This pre-study already adds three strengths to research about similarities between characters and viewers as often-used predictors for PSI intensity. First, this study expands the analysis of similarity in media research to a more objectively measured similarity rooted in psychological research on social interactions (Montoya et al., 2008). Thereby, different similarity types—demographic and psychological—were included. Second, this study accounted for external validity by letting viewers choose the content they watched and the time they watched. By applying a multimethod design, the analysis between similarity and PSI has been assessed in a real-life setting by considering users' current media use habits (Jenner, 2014). Third, data about the perceived strength of PSI were collected immediately after media use.

The study has three main limitations. First, the null results must be interpreted with caution. The sample was not representative. Data collection was limited to two weeks, and sessions with intense PSI may not have occurred during this brief period. The number of viewing sessions was small due to data loss when participants did not complete postsession surveys, or when they indicated that all characters were irrelevant to them.

Second, only actual similarity was analyzed. It could be assumed that actual similarity cannot create the sort of intimacy that is crucial for PSI (Klimmt et al., 2006). The interpretation was limited without information about participant-perceived similarities; thus, it is unclear whether viewers did not feel similar or felt similar despite being objectively dissimilar.

Third, the EPSI scale used was not ideal in the study setting. The scale was developed for a TV host addressing viewers through verbal or physical cues (Hartmann & Goldhoorn, 2011). In this study, participants watched content on Netflix wherever they wanted and

interacted with various characters. In these self-directed viewing sessions, the PSI intensities were very low (EPSI, $M=1.21$, $SD=.43$).

The results and limitations of this pre-study were used in the preparation of the main study reported in the article. For example, viewer-perceived similarity was additionally assessed, and the PSI-Process scale (Hartmann & Schramm, 2008) was used to measure PSI in these viewing settings.

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Tables

Table 1

The influence of demographic similarities on parasocial interactions.

Predictors	parasocial interactions		
	Est.	SE	p
Intercept	1.17	.13	<.001
age similarity	.18	.10	.078
gender similarity	-.02	.08	.771
relationship similarity	.04	.10	.722
job similarity	-.01	.09	.992
living situation similarity	.07	.13	.596
Random Effects			
σ^2	.08		
τ_{00}	.15	User	

Note: Similarity: 0 = dissimilar, 1 = similar. $N = 42$ participants with 102 viewing sessions.

Table 2*The influence of psychological similarities on parasocial interactions.*

Predictors	parasocial interactions		
	Est.	SE	p
Intercept	.77	.29	<.00
		1	
extraversion similarity	.19	.10	.063
agreeableness similarity	-.06	.09	.505
conscientiousness similarity	-.05	.09	.563
neuroticism similarity	-.03	.11	.761
openness similarity	.00	.08	.957
loneliness similarity	.05	.05	.308
self-esteem similarity	.13	.09	.173
Random Effects			
σ^2		.08	
τ_{00}		.15	User

Note: Similarity: 0 = dissimilar, 1 = similar. $N = 42$ participants with 102 viewing sessions.

5.2.2 Article II: Additional Analysis for Parasocial Relationships

Similarities between media characters and audience members are not only analyzed for their PSPs, but also for their PSRs. Existing research has shown that various similarities influence audience members' PSEs, including also their more long-term oriented PSRs, even though to a lesser extent (e.g., Bond, 2018; Cohen & Hershman-Shitrit, 2017; Tolbert & Drogos, 2019). To enable a comparison of the influence of factors anchored in each media exposure setting on PSPs and PSRs, in this additional analysis, the role of the different similarity types is re-analyzed for audience members' PSRs with the media characters assessed in the same study. Due to the higher relevance of similarity in PSPs, the main article only included the analysis for the influence of similarity and PSP. In the dissertation, the additional analysis for similarity and PSR is included to further enable the comparison of the importance of factors anchored in the media exposure situation and their influence on PSP vs. PSR.

Based on the presented research on the role of similarity in audience members' PSPs with media characters (see Article II), the same hypotheses that were derived for PSP are retested for their PSRs with the same media character. Similarly to the assumptions in Article I, even though both concepts differ, we assume the same effects on the long term. Research clearly differentiating both constructs and considering viewer-character similarity is insufficient to allow for formulating different hypotheses. Thus, we formulated the hypotheses with the same assumptions for PSRs as for PSPs, knowing that both concepts differ. We assume that situational factors have a stronger effect on the immediate experience and, with that, on PSPs. Since PSRs can evolve from PSP (Dibble et al., 2016; Gleich, 1996), we expect that each will be influenced similarly, although PSRs probably to a limited extent.

H1a. Viewers with actual and viewer-perceived demographic backgrounds similar to the media character experience stronger *parasocial processing* and *parasocial relationships* than viewers with different demographic backgrounds.

RQ2. How do actual and viewer-perceived similarities between media characters and viewers concerning (a) the Big Five, (b) loneliness, and (c) the level of self-esteem relate to the strength of *parasocial processing* and *parasocial relationships*?

Measurements

Parasocial Relationships

Audience members' PSRs ($M = 3.04$, $SD = 1.06$, $\alpha = .91$) with the media characters were assessed with eight items of the parasocial friendship scale (Tukachinsky, 2011).

Parasocial Processing

PSPs ($M=3.82$, $SD=.71$, $\alpha=.93$.) were assessed with six items of Schramm & Hartmann's (2008) PSI-Process Scale.

Results

Following the procedure in the main study for the analysis of similarity in PSPs, the same models were applied for audience members' PSRs with the media characters. First, the ICC of the null model shows that both, PSRs ($ICC = .49$) and PSPs ($ICC = .48$) depended to a significant extent on the viewing sessions, and with that, possibly on the media characters.

To test H1, an additional multilevel regression was calculated with the demographic similarity scores as independent, and PSR as dependent variable. In the table, the results for the analysis with PSP as dependent variable from the main article are included to facilitate the comparison. The results (Table 1) show that for PSPs and PSRs, only relationship similarity increases audience members' PSPs and age similarity decreases PSPs. All types of sociodemographic similarities did not influence viewers' PSRs. Thus, H1 was rejected for PSRs.

To test RQ2, an additional multilevel regression was calculated with the psychological similarities of the Big Five personality traits, loneliness, and self-esteem as independent

variables, and PSR as dependent variable. The results (Table 2) show that the effects of psychological similarities on PSP and PSRs differ. While the individual similarities in extraversion, agreeableness, conscientiousness, neuroticism, and openness all did not influence viewer PSRs, the perceived similarity in the Big Five increased their PSP and their PSRs. Thereby, the effect was stronger for PSRs ($B = .24, SE = .05, p < .001$) than for PSP ($B = .08, SE = .04, p = .039$). For PSRs, additionally the actual similarity in loneliness and the perceived similarity in self-esteem both increased viewer PSRs. With that, no clear pattern emerge for the influence of psychological similarities on PSP and PSRs. Only the perceived similarity in the Big Five increased PSP and PSRs, the other effects differed between PSP and PSRs.

Discussion

These additional analyses of the role of similarity in PSRs supplements the main analysis with the focus on PSP. While the role of similarity is especially analyzed in the context of PSI and PSP (e.g., Bui, 2017; Greenwood et al., 2021; Sokolova & Kefi, 2020; Stein et al., 2022), other studies also showed the importance of similarity in viewer PSRs (e.g., Bond, 2018; Cohen & Hershman-Shitrit, 2017; Tolbert & Drogos, 2019). Research about social relationships underlined the importance of similarity in social relationships, for example, in relationship satisfaction or emotional closeness (e.g., Gonzaga et al., 2007; Mund & Johnson, 2021; Wrzus, 2008). Thus, the assumption that similarity also plays an important role in PSRs is plausible.

However, the results showed that sociodemographic similarities and most of the psychological similarities analyzed did not influence viewer PSRs. Perceived similarities regarding the Big Five personality traits and self-esteem increased viewers' PSRs with the media character, whereas the actual similarities in these psychology traits did not influence PSRs. At the same time, actual similarity in loneliness increased PSR strengths, whereas perceived similarity in loneliness did not influence PSRs. This is interesting, as for PSP, only perceived similarity in the Big Five personality traits influenced viewer PSP. Thus, if viewers

perceive the media character as similar as themselves in the general personality traits, this increases PSP and PSRs. Actual similarity in loneliness and perceived similarity in self-esteem only influence viewers' feeling of friendships with the media character, but not their general processing of the media character during media exposure.

Overall, the additional analyses show that similarity factors are relevant not only for viewers' processing of the media character (PSP) but also for their more long-term oriented relationships with the media character (PSR). Thus, similarity as a characteristic anchored in particular episodes of media exposure, influence both types of PSEs, also long-term oriented PSRs.

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Tables

Table 1

The influence of demographic similarities on parasocial processing and relationships.

<i>Predictors</i>	parasocial processing			parasocial relationships		
	<i>Est.</i>	<i>SE</i>	<i>p</i>	<i>Est.</i>	<i>SE</i>	<i>p</i>
Intercept	3.47	.12	<.001	2.79	.18	<.001
age similarity	-.28	.11	.010	.27	.15	.084
gender similarity	.02	.08	.817	-.07	.12	.592
relationship similarity	.30	.10	.003	.16	.14	.246
job similarity	-.02	.11	.838	-.03	.16	.861
living situation similarity	.16	.13	.219	-.16	.18	.369
perceived demographic similarity	.06	.04	.151	.11	.06	.061
<i>Random Effects</i>						
σ^2		.27			.55	
τ_{00}		.24 _{User}			.58 _{User}	

Note: Actual similarities: 0 = dissimilar, 1 = similar. Perceived similarity: 0 = dissimilar to 5 = similar.

N = 78 participants with 233 viewing sessions.

Table 2

The influence of similarity in psychological similarities on parasocial processing and relationships.

<i>Predictors</i>	parasocial processing			parasocial relationships		
	<i>Est.</i>	<i>SE</i>	<i>p</i>	<i>Est.</i>	<i>SE</i>	<i>p</i>
Intercept	3.76	.23	<.001	1.66	.29	<.001
extraversion similarity	.23	.09	.015	.11	.12	.325
agreeableness similarity	.08	.09	.397	-.13	.12	.250
conscientiousness similarity	-.20	.08	.019	-.12	.10	.240
neuroticism similarity	-.06	.08	.471	-.17	.11	.102
openness similarity	.00	.08	.953	.13	.11	.211
perceived personality similarity	.08	.04	.039	.24	.05	<.001
loneliness similarity	-.09	.05	.092	.15	.06	.018
perceived similarity in loneliness	-.01	.04	.736	.06	.05	.173
self-esteem similarity	-.01	.07	.877	-.11	.09	.193
perceived similarity in self-esteem	.02	.04	.532	.22	.05	<.001
<i>Random Effects</i>						
σ^2		.27		.42		
τ_{00}		.24	User	.37		

Note: Actual similarities: 0 = dissimilar, 1 = similar. Perceived similarity: 0 = dissimilar to 5 = similar.

N = 84 participants with 296 viewing sessions.

5.3 *Article III: Farewell on Screen: Uncertainty in Parasocial Relationships and Breakups with Fictional Media Characters*

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CRedit statement: Michelle Möri: conceptualization, methodology, investigation, data curation, formal analysis, writing (original draft), writing (review & editing), project administration.

Open data: The pre-registration, material, code, and supplemental material of this paper can be found on OSF: <https://osf.io/tpf6x/>

Abstract: Viewers form enduring bonds, or parasocial relationships (PSRs), with media characters. They suffer breakup distress when such relationships are dissolved and show emotional reactions similar to those from the dissolution of social relationships. Alongside definite and temporary breakups, this paper introduces the term *uncertain breakup*, and the three breakup types are analyzed and compared. In a two-survey study with viewers of five shows (*Emily in Paris*, *Bridgerton*, *Peaky Blinders*, *Shadow and Bone*, *Never Have I Ever*), the three parasocial breakup types were analyzed in Study I with independent samples and with dependent samples in Study II, which also considered the behavioral effects of parasocial breakups. The results show that PSRs positively predict viewers' temporary, uncertain, and definite breakup distress and subsequent PSRs after a breakup. The three types of breakup distress differ regarding, for example, their moderation of viewers' level of loneliness or their behavioral effects. The results' implications are discussed for future research on PSRs and their dissolution.

Keywords: parasocial relationships, parasocial breakups, media characters, entertainment, affective effects, behavioral effects

Media characters are often the focus of entertainment media or media productions in general (Klimmt et al., 2006). How viewers respond to them and process parasocial encounters is a crucial concept of media research (R. Tukachinsky et al., 2020). Through media exposure, viewers can form enduring bonds with media characters, called parasocial relationships (PSRs), which have characteristics similar to interpersonal relationships (R. Tukachinsky et al., 2020) regarding, for example, sociability, sympathy, and intimacy (Gleich, 1996). PSRs can outlast and develop beyond media exposure (Klimmt et al., 2006) and have positive effects on viewers by increasing their feeling of belonging (Rosaen & Dibble, 2016) or self-esteem (C. M. Brown et al., 2015). As with social relationships, PSR can be dissolved, adversely affecting viewers (Eyal & Cohen, 2006). *Parasocial breakups* (PSBs) can result in emotional reactions similar to that from the dissolution of a social friendship. These negative emotional reactions, called *PSB distress*, leave viewers feeling angry, sad, or lonely (Cohen, 2004). While PSR is an often-examined construct in media research (for an overview, see Liebers & Schramm, 2017; Schramm et al., 2022), findings on PSBs are limited. In a systematic inventory of 60 years of parasociality research, only 1% of the analyzed articles focused on PSBs (Liebers & Schramm, 2019).

The literature on PSBs differentiates *definite* and *temporary* breakups (see, for an overview; Hu, 2023). A definite PSB describes a breakup between audience members and a media character that is final (Cohen, 2004). They can happen, for example, when the show ends or the character dies or is taken off the show (Cohen, 2004; Eyal & Cohen, 2006), and viewers no longer engage with the character in new content. *Temporary* breakups happen when no new episodes are released for a period of time but viewers know that the character will return. During a writers' strike, a study showed that even this temporary breakup from a character can result in emotional suffering for viewers (Lather & Moyer-Guse, 2011). Thus, viewers suffer emotionally from temporary and definite PSBs with characters.

This paper introduces a third type of PSB that stems from the changes in media-usage habits and viewers' new online streaming opportunities. Definite and temporary PSBs with fictional characters were often analyzed in the context of linear television with strict schedules, when viewers' parasocial encounters depended on programming (e.g., Eyal & Cohen, 2006; Lather & Moyer-Guse, 2011). Streaming platforms now often release entire seasons at once (Granow et al., 2018), enabling viewers to parasocially engage with media characters anytime, for as long as they want, and from anywhere. A new type of PSB emerged with this shift in autonomy from TV stations to the audience. *Uncertain* breakups describe how, after the release of the last episode, it is unclear if and when there will be new episodes with the media character. Viewers can consume the new episodes in the rhythm they want but must then endure uncertainty if and when their PSR can develop further.

This paper analyzes PSRs and PSB distress in a natural viewing environment according to current media usage on streaming platforms, with their relationship investigated through two studies of popular shows. It expands existing PSB research, where often only one specific type of PSB was analyzed, and includes a third type, uncertain breakups. By analyzing all three breakup types in one study, this paper contributes to the literature by comparing each of their effects. In Study II, the analysis is done with dependent samples to investigate the development of PSR and PSB distress over time.

Parasocial Relationships With and Breakups From Media Characters

Viewers can develop relationships with media characters through mediated encounters, which are defined as PSRs and often compared to social relationships (Gleich, 1996; R. Tukachinsky, 2011). Social relationships can be dissolved, as can PSRs (Cohen, 2003). There is much research on the consequences of the dissolution of social relationships; for example, such dissolution was shown to cause emotional reactions that led people to seek psychological assistance (McCarthy et al., 1997). Other studies analyzed if breakups are harder for certain

people, such as those with a strong need for approval (Barbara & Dion, 2000). In this vein, the consequences of PSBs have been analyzed, revealing that viewers show emotional reactions to a breakup with a media character that are similar to a breakup with a real friend (Cohen, 2004; Eyal & Cohen, 2006).

There are several causes of PSBs, including a character being axed, the show ending, or viewers deciding to stop watching (see, for an overview; Hu, 2023). In one line of research, researchers analyzed breakups forced upon the viewers. For example, they compared PSBs with real-life breakups, with viewers shown to feel closely the same emotional distress when imagining the loss of their favorite media character as they would for a social breakup (Cohen, 2004). For PSB distress, analyzed following the last episode of the comedy show *Friends*, viewers with stronger PSRs suffered more emotionally from the breakup than those with weaker PSRs (Eyal & Cohen, 2006). The same effect was found for other breakups forced upon the viewers through programming or the show's end (e.g., Bingaman, 2022; Bond & Calvert, 2014; Ellithorpe & Brookes, 2018; Krakowiak, 2022).

Besides the PSBs forced upon viewers by a show, a PSB can also result when viewers decide to stop watching a show, for example, due to an actor's transgression (Hu, 2016; Hu et al., 2018) or to personal growth (Hu, 2023). In two studies, participants were confronted with a manipulated news story about a transgression or scandal concerning an actor. Viewers with stronger PSRs reported stronger PSB distress when the breakup was caused by a scandal concerning the character (Hu, 2016) or the actor's transgression (Hu et al., 2018). It is important to note that a breakup with a liked character is only one of several possible coping mechanisms after an actor's transgression, and if viewers want to avoid these negative emotions of a PSB distress, they can employ other coping strategies (R. R. Tukachinsky & Downey, 2023). One example of personal growth resulting in PSBs is the transition from early childhood to a new stage of life. A study showed that children experienced PSB distress after outgrowing children's

television shows such as Sesame Street (Bond & Calvert, 2014). For PSBs resulting from viewers' decisions—either through personal growth or due to an actor's transgression—viewers with strong PSRs to a character suffer more from PSBs.

Taken together, several studies have shown that viewers with stronger PSRs report stronger PSB distress in different situations, such as temporary and definite breakups, forced breakups, or those chosen by viewers (see, for an overview; Hu, 2023). This paper aims to re-test this relationship for the three types of PSBs.

H1: Viewers with stronger PSRs report stronger PSB distress.

In early research on PSRs, it was often assumed that lonely people compensate for their lack of social relationships through PSRs (e.g., Rosengren & Windahl, 1971; Rubin et al., 1985). The mixed results then led to the assumption that PSRs are no less meaningful replacements for social relationships. They are rather seen as part of a viewer's social life and often comparable to social relationships (Klimmt et al., 2006). For example, characteristics important in social relationships, such as empathy (Cummins & Cui, 2014) or attachment style (MacNeill & DiTommaso, 2023), have been shown to be important in PSRs. This idea of personality traits characteristic of social compensation being meaningful in PSRs was taken up for PSBs. It could be that while loneliness does not directly influence viewer PSRs, loneliness could contribute to the distress viewers feel during a PSB insofar that lonely viewers suffer more from PSB than less lonely viewers. This assumption was tested in studies about PSB. For example, Eyal and Cohen (2006) showed that lonely viewers suffered more from a PSB, regardless of the strength of their PSRs. The authors assumed that loneliness was more relevant for the dissolution than for building and developing PSRs (Eyal & Cohen, 2006). This relationship is re-analyzed in Hypothesis 2.

H2: The relationship in H1 is moderated through viewers' level of loneliness. The lonelier viewers are, the stronger is the relationship between PSR and PSB distress.

Temporary, Uncertain, and Definite Parasocial Breakups

In this paper, three types of PSBs are analyzed. Definite PSBs describe a final breakup situation with no chance for viewers to rekindle the relationship with the media character (Cohen, 2004). When individuals deny this definitiveness, they can pretend that the breakup is temporary to avoid the negative feelings (Daniel & Westerman, 2017). Temporary PSBs describe a fleeting state; viewers endure a temporary breakup before rekindling their relationship. Lather and Moyer-Gusé (2011) first analyzed this PSB after a writer's strike had occurred and no new episodes had aired for many shows. Their results showed that viewers, who already knew that their favorite characters would return to the screen, and some already had, still suffered emotionally. In their additional analyses, they already considered the difference between what is introduced in this paper as uncertain PSBs and temporary PSBs. Lather and Moyer-Gusé differentiated between viewers whose programs were still off the air without knowledge about the future development (uncertain PSBs), and viewers whose programs had resumed airing new episodes at the time of data collection. However, the additional analyses showed no differences between viewers experiencing temporary and uncertain PSBs (Lather & Moyer-Guse, 2011).

The prevalence of temporary breakups has strongly increased in the current media environment and resulted in the prevalence of uncertain PSBs. In linear television, temporary breakups occur during special or seasonal programming (Lather & Moyer-Guse, 2011). Due to technological changes and the rise of streaming platforms releasing entire seasons at once (Granow et al., 2018), temporary breakups are prevalent. When the last episode of a season airs, it is often unclear whether a new season will be produced, as it depends on viewing rates or other success factors. During this time, viewers endure uncertainty about their PSRs. Uncertain PSBs describe the situation of viewers who have consumed all media content with the character available and do not know if and when new content will be produced and released. During

uncertain PSBs, viewers experience uncertainty over their PSRs. Uncertain breakups can result in definite breakups when a show is taken off the air, or viewers can rekindle their PSRs when a new season is released. However, the state of uncertain PSBs is characterized by uncertainty over the future of viewers' PSRs with the character.

Uncertainty in Parasocial Breakups

Uncertainty takes an important role in social relationships, thus, should also be considered in the mediated context. Its importance can be illustrated with research on social breakups and the role of predictability in the mediated context. An essential characteristic of PSRs is their predictability and dependability. They make media characters attractive as parasocial friends (Hartmann et al., 2016; Horton & Wohl, 1956). Parasocial friends benefit from their regular and reliable appearance, compared to more unreliable and possibly multi-layered social friends (Hartmann et al., 2016). The three types of breakups differ in their level of predictability. Temporary breakups are a situational state, and it is certain that the character will return. There is no uncertainty in a definite breakup; viewers know there will be no new content with the media character in that setting—unless they are in denial (Daniel & Westerman, 2017).

Uncertain breakups differ, as viewers have to endure uncertainty over their PSRs without knowing the outcome of their relationship. This uncertainty is what reduces the attractiveness of the characters as parasocial friends, as it withdraws their predictability (Hartmann et al., 2016). In the social context, uncertainty is the ability of an individual to understand and predict another person's behavior. Following the uncertainty reduction theory, individuals always strive to reduce uncertainty in relationships with others (Berger & Calabrese, 1975). Thus, relationship uncertainty is an important construct when analyzing individuals' relationships. It was shown to be essential in different stages of relationships, ranging from the getting-to-know phase to the dissolution of a relationship (Solomon & Knobloch, 2004). When

individuals endure uncertainty in their social friendships, it often results in negative feelings (Dainton, 2003; Knobloch & Solomon, 2002). As research on social friendships underlines the importance of considering uncertainty in relationship development, it is worthwhile to consider this uncertainty also in mediated friendships. The differentiation of uncertain from definite and temporary PSBs is a first step in doing so.

Thus, the overarching research question of this paper is the comparison of the three types of PSBs and, with that, the effect of the different levels of uncertainty on viewers' breakup distress:

RQ1: How do parasocial relationships, parasocial breakup distress, and the relationship between them differ for temporary, uncertain, and definite breakups?

Study I

Method of Study I

Research Design and Procedure

Quantitative online surveys were conducted with independent samples for three different entertainment shows selected for their popularity, different genres, the existence of already at least one season and the release date of a new season between December 2021 and June 2022. Based on these criteria, the choices were *Emily in Paris* (2nd season, December 2021), *Bridgerton* (2nd season, March 2022), and *Peaky Blinders* (6th season, June 2022).

For each show, two surveys were assessed (see Figure 1). The data collection for the first survey ran 8–6 weeks before the release of the new season. For these two weeks, participants who had watched the shows' previous seasons were recruited through the snowballing system and social media fan pages. This first survey assessed participants' existing PSRs with a chosen media character (Emily, Lady Whistledown, and Thomas Shelby), their PSB distress, loneliness, and sociodemographics. This survey measured temporary PSB

distress, as the participants had watched the previous season and knew about the soon-release of new episodes.

After the release of the new seasons of the shows, during the next six weeks, viewers who had watched them were recruited and could participate in the second survey. The same constructs as in the first survey were assessed. For *Emily in Paris* and *Bridgerton*, *uncertain* PSB distress was evaluated, as after the release of the season, it was not known if a next season would be produced. Data collection was stopped when the producers announced the next season. To ensure that the participants knew about the uncertainty of the show's future, they were informed about it in the survey before answering the questions about their PSR and PSB distress. For *Peaky Blinders*, *definite* PSB was assessed, as it was already known that it would be the final season. Again, participants were informed that it was the final season to ensure they were aware of the definitiveness of their PSB.

Measures

All items were measured using a five-point Likert-type scale ranging from 1 (“do not agree at all”) to 5 (“fully agree”), which is available on OSF. Means, standard deviations, and Cronbach's alpha values are represented in Table 1.

Loneliness

Participants' level of loneliness (Russell et al., 1980) was assessed with 10 items of the revised UCLA Loneliness Scale (e.g., “There is no one I can turn to”).

Parasocial Relationships

The intensity of participants' PSRs was assessed in both surveys with eight items (e.g., “Sometimes, I wish I knew what Emily would do in my situation”) from the parasocial friendship scale (Tukachinsky, 2011).

Parasocial Breakup Distress

Participants' PSB distress was measured in both surveys with seven items (e.g., "Now that the season with Emily is over, I feel like I lost a good friend") of the PSB distress scale (Eyal & Cohen, 2006). The PSB distress for temporary breakup was assessed for all three shows in the first survey, as they were conducted during a break between two seasons, where participants were aware that a new season would be released. Uncertain PSB distress was assessed with the second survey for *Emily in Paris* and *Bridgerton*, as at the time of data collection, it was unclear if and when a next season would be produced. Participants were additionally made aware of this uncertainty at the beginning of the survey. Definite PSB distress was assessed with the second survey for the viewers of *Peaky Blinders*, as they had finished watching the final season at the time of data collection. At the beginning of the survey, they were informed that this was the final season.

Participants

Emily in Paris

The first survey sample consisted of 71 participants aged 18–51 years ($M=26.36$, $SD=7.21$), 82% of whom identified as female. The second consisted of 37 participants aged 18–55 years ($M=30.16$, $SD=10.89$), 72% of whom identified as female. Based on viewing statistics, they closely represented the show's audience (Nielsen Panel, 2022). Nineteen days after the second season's release, Netflix announced that third and fourth seasons would be produced. Data collection stopped earlier than planned because it was no longer an uncertain breakup, resulting in a relatively small second sample.

Bridgerton

The first survey sample was of 97 participants aged 18–58 years ($M=26.42$, $SD=9.28$), of whom 87% identified as female. The second consisted of 42 participants aged 19–54 years

($M=27.11$, $SD=9.29$); again, 87% identified as female. The gender imbalance in the sample represented the show's audience (Mitovich, 2022). When third and fourth seasons were confirmed 19 days after the season's release, data collection stopped, resulting in a relatively small sample.

Peaky Blinders

The first survey sample consisted of 97 participants aged 18–58 years ($M=24.76$, $SD=8.88$), of whom 46% identified as female. The second consisted of 99 participants aged 18–64 years ($M=30.44$, $SD = 12.20$), 47% of whom identified as female.

Data Preparation

The three datasets were cumulated for the analysis. The data from the first survey were used to analyze temporary breakups for all three shows. For *Emily in Paris* and *Bridgerton*, uncertain breakup was analyzed after the season's release. A definite breakup was analyzed with the second survey for *Peaky Blinders*. To control for the show's influence, the show was added as a control variable.

Results of Study I

The results showed that stronger PSRs led to stronger temporary ($\beta=.45$, $SD=.04$, $p<.001$, $F(2,262)=58.00$, $R^2=.30$), uncertain ($\beta=.46$, $SD=.08$, $p<.001$, $F(2,74)=29.22$, $R^2=.43$), and definite breakup distress ($\beta=.47$, $SD=.07$, $p<.001$, $F(1,96)=44.53$, $R^2=.31$). For all three types of breakups, stronger PSRs were a positive predictor for PSB distress, showing no differences between the types of PSBs (H1 confirmed).

To analyze H2, loneliness was introduced as a moderator between PSR and PSB distress (Table 2). For temporary breakups, loneliness moderated the relationship between PSRs and PSB distress. Lonely viewers had the strongest relationship between PSR and PSB distress ($\beta=.50$, $SD=.06$, $p<.001$), followed by medium ($\beta=.38$, $SD=.05$, $p<.001$) and not lonely

individuals ($\beta=.32$, $SD=.06$, $p<.001$). No interaction effect with loneliness was found for PSR and uncertain ($\beta=-.02$, $SD=.10$, $p=.873$) or definite PSB distress ($\beta=.05$, $SD=.07$, $p=.444$). When considering viewers' loneliness, the direct effect of PSRs on PSB distress was no longer significant for temporary ($\beta=.20$, $SD=.12$, $p=.080$) and definite PSBs ($\beta=.29$, $SD=.17$, $p=.083$). As loneliness only moderated the relationship between PSR and PSB distress for temporary breakups, H2 was partially confirmed.

Independent *t*-tests were calculated to compare the three types of PSB distress (RQ1; Table 3). There were no significant differences in the strength of PSR between temporary and uncertain or definite breakups. No differences in PSB distress were shown between temporary and uncertain breakups. For *Peaky Blinders*, a temporary breakup could be compared to a definite breakup. The viewers' breakup distress was significantly higher after the definite ($M=2.02$, $SD=.92$, $p=.019$) than during the temporary breakup ($M=1.72$, $SD=.88$).

Discussion and Limitations of Study I

Technological changes, such as the release of whole seasons on streaming platforms, have caused viewers' consumption of television shows to change considerably (Granow et al., 2018; Jenner, 2014). With that, the prevalence of temporary PSBs has increased. PSBs can lead to emotional distress for viewers, even if they know the breakup is only temporary (Lather & Moyer-Guse, 2011). Study I extended the idea of temporary PSB distress by analyzing them with respect to the current media environment. Additionally, the term uncertain breakup was introduced to describe breakup situations in which it is unclear if the show with the character will return.

From three popular television shows covering different genres, PSRs increased the distress viewers experienced when there were temporary, uncertain, and definite breakups. This is in line with the results of studies analyzing the influence of PSR on PSB distress in definite (e.g., Cohen, 2004; Eyal & Cohen, 2006) and temporary situations (e.g., Lather & Moyer-Guse,

2011). This relationship is moderated through loneliness for temporary but not for uncertain and definite breakups. In another study, this influence was shown for definite breakups after the release of the final season (Eyal & Cohen, 2006). However, there were some differences in the study designs. In the Study I presented in this paper, participants were all asked about the same character, probably leading to more variance in PSR than in the study of Eyal and Cohen, in which participants could freely choose their favorite *Friends* character. Additionally, in Study I, participants had to watch the entire final season to participate. The results of both studies, Eyal and Cohen (2006) and Study I in this paper, underline the importance of loneliness in the relationship between PSR and PSB distress. Possibly, lonely people do not have stronger PSRs or more parasocial friends (e.g., Rosaen & Dibble, 2016; Tukachinsky et al., 2020), but the findings indicate they suffer more emotionally if a PSR is dissolved. More studies are needed to analyze the PSB type's role in this relationship.

When comparing PSRs and breakup distress before and after the release of a new season, there were no differences between temporary and uncertain breakups. In a definite breakup, the breakup distress was significantly higher than after a temporary breakup. Still, the level of emotional distress was relatively low ($M=2.02$ on a five-point Likert scale), which is in line with the results of another study, which showed that viewers react to PSBs in a similar way to the dissolution of a social friendship, albeit with a weaker intensity (Eyal & Cohen, 2006).

Several factors limit the results of Study I, the first concerning the samples. The numbers differed considerably, and there was gender imbalance due to the shows chosen. Because of Netflix's announcements concerning the following seasons' production, data collection twice had to be stopped earlier than planned. This was a risk of Study I's design allowing the analysis of PSRs and PSBs in a natural environment without artificially creating a breakup situation. No individual development over time could be analyzed, as the samples were independent. Second, the relationship between PSR and PSB distress was analyzed for three shows representing

different genres, and the results cannot be generalized. Third, only affective effects were analyzed for viewers' breakup distress. An analysis in 2011 showed that viewers engage in other media tasks, such as watching reruns on TV and movies or spending time on the Internet, during a PSB (Lather & Moyer-Guse, 2011). In the current media environment, it is much easier to watch reruns on streaming platforms. Also, the variety of content available may influence subsequent activities, making their reanalysis seem promising.

To overcome some of the limitations, a second study was conducted as Study II. The same hypotheses and RQs were tested and expanded. The influence of viewers' PSRs measured before the new seasons' release was assessed on their subsequent PSB distress (H1), considering viewers' state of loneliness (H2). With dependent samples, individuals' development of PSRs and PSB distress over time could be analyzed. H3 assumed that viewers' strength of PSR before a breakup increases PSB distress, which reduces PSR at the second time point. Adapted to current possibilities in media consumption, RQ2 exploratorily analyzes: What are viewers' behavioral reactions to PSBs, and how do they differ for the three types of PSBs?

Study II

Method of Study II

Research Design and Procedure

The second study used the same design as Study I but with dependent samples (see Figure 2). For Study II, again, three shows were chosen: *Emily in Paris* (3rd season, December 2023) to analyze temporary breakups, *Shadow and Bone* (2nd season, March 2023) for uncertain breakups, and *Never Have I Ever* (4th and final season, June 2023) to analyze definite breakups. Participants were recruited on a panel platform. Only those individuals who had watched the shows' previous seasons were eligible. Participants received a small monetary incentive (1st survey: £1.05, 2nd survey: £1.00). The same surveys as in Study I were assessed, and for each show, 200 English-speaking participants (gender-balanced) were recruited. After

the release of the new season, participation in the second survey was possible only for the participants of the first sample who have watched the entire new season. Participation in the second survey was possible until six weeks after the new season's release. Study II was approved by the Institutional Review Board.

Measures

The same measures were employed as in Study I for viewers' loneliness (Russell et al., 1980), PSRs (R. Tukachinsky, 2011), and PSB distress (Eyal & Cohen, 2006). For means, standard deviations, and Cronbach's alpha values, see Table 4.

Alternative Activities

Participants were asked to indicate the activities they used to fill the time after finishing the new seasons, following the idea of Lather and Moyer-Gusé (2011). The activities were adapted to current media use possibilities, including re-watching old episodes of the same show.

Participants

Emily in Paris

The first survey sample was of 200 participants aged 18–74 years ($M=36.12$, $SD=12.33$), of whom 144 participants aged 19–74 years ($M=37.10$, $SD=12.53$) participated in the second survey. Both samples were gender-balanced.

Shadow and Bone

The first survey sample was of 200 participants aged 19–79 years ($M=34.41$, $SD=11.59$), of whom 96 aged 20–74 years participated in the second ($M=33.53$, $SD=10.86$), with 47% identifying as female.

Never Have I Ever

The first sample was of 200 participants aged 20–86 years ($M=37.86$, $SD=13.16$), of whom 142 aged 20–86 years participated in the second ($M=37.86$, $SD=12.88$), with 52% identifying as female.

Results of Study II

Study II analyzed viewers' temporary, uncertain, and definite PSB distress after the new seasons' releases with dependent samples. Viewers' temporary breakups were analyzed for *Emily in Paris*, uncertain breakups for *Shadow and Bone*, and definite breakups for *Never Have I Ever*. The analyses for H1–H3 are presented for each type of breakup, then the results for the three types of breakups are compared (RQ1), and viewers' behavioral reactions to PSBs are explored (RQ2). To analyze H1, viewers' PSRs from the first survey provided the independent variable, and their PSB distress indicated in the second, after the new season's release, was the dependent variable. For H2, viewers' loneliness was added as a moderator. To analyze H3, viewers' PSRs from the first survey provided the independent variable, their PSB distress after the new season's release the mediator, and their PSRs after the release the dependent variable. To answer RQ1, *t*-tests for dependent samples were calculated to compare viewers' PSRs and PSB distress. For RQ2, the activities viewers indicated engaging in after the breakup were explored.

Temporary Breakups

With the *Emily in Paris* sample, analysis began at the beginning of the temporary breakup, as they had completed the survey after finishing the new season. Table 5 shows that stronger PSRs led to more temporary PSB distress ($\beta=.44$, $SD=.07$, $p<.001$; H1 confirmed). When loneliness was introduced as a moderator, PSRs still increased viewers' PSB distress ($\beta=.43$, $SD=.15$, $p=.005$). There was no direct effect of loneliness on PSB ($\beta=.09$, $SD=.20$,

$p=.671$) and no interaction effect between PSRs and loneliness ($\beta=.00$, $SD=.07$, $p=.965$; H2 rejected).

A mediation model was calculated to test the development of PSRs before and during the temporary breakup (Table 6). The results showed that stronger PSRs before the release of the new season led to stronger PSB distress after the release ($\beta=.44$, $SD=.07$, $p<.001$) and stronger PSRs ($\beta=.68$, $SD=.06$, $p<.001$). The temporary PSB influenced viewers' subsequent PSRs ($\beta=.39$, $SD=.07$, $p<.001$; H3 partially supported), as PSB distress increased subsequent PSRs instead of decreasing them. With 66% of the variance in PSR intensity after the temporary breakup, explained through PSRs before the release and the temporary PSB distress experienced, a vast amount could be explained.

Uncertain Breakups

The same hypotheses were tested with the *Shadow and Bone* sample for uncertain breakups (Table 5). When testing the direct effect of PSR on PSB distress, viewers with stronger PSRs reported more PSB distress during an uncertain breakup than those with weaker PSRs ($\beta=.24$, $SD=.11$, $p=.038$; H1 confirmed). In the second step, loneliness was introduced as a moderator and the direct effect of PSRs on PSB distress disappeared ($\beta=.62$, $SD=.32$, $p=.055$). However, the sample was relatively small, and the effect, with a p-value of .055, was close to the threshold for significant results. There was neither a direct effect of loneliness on PSB distress ($\beta=.67$, $SD=.43$, $p=.120$) nor an interaction effect between PSRs and loneliness ($\beta=-.17$, $SD=.13$, $p=.198$; H2 rejected).

In Table 6, the development of PSRs before and during the uncertain breakup shows that stronger PSRs led to stronger uncertain PSB distress ($\beta=.24$, $SD=.11$, $p=.038$) and stronger PSRs during the uncertain breakup ($\beta=.40$, $SD=.10$, $p<.001$). The intensity of uncertain PSB distress positively influenced subsequent PSRs ($\beta=.43$, $SD=.09$, $p<.001$; H3 partially

supported). With a 37% variance during the temporary breakup, viewers' PSRs before watching the new season and the distress they experienced during the breakup explained a moderate amount.

Definite Breakups

With *Never Have I Ever*, the same hypotheses were tested for definite breakups (Table 5). During the definite breakup, viewers with stronger PSRs indicated more PSB distress than viewers with weaker PSRs ($\beta=.50$, $SD=.07$, $p<.001$; H1 confirmed). To test H2, the viewer's loneliness was introduced as a moderator. Viewers' PSRs increased their PSB distress ($\beta=.61$, $SD=.16$, $p<.001$). There was no direct effect of loneliness on PSB distress ($\beta=.16$, $SD=.20$, $p=.422$) nor interaction effect between PSRs and loneliness ($\beta=-.05$, $SD=.07$, $p=.466$; H2 rejected).

The development of PSRs before and during the definite breakup was tested with a mediation model (Table 6). The results showed that viewers with stronger PSRs before the breakup suffered more from the definite breakup ($\beta=.50$, $SD=.07$, $p<.001$) and, in turn, reported stronger PSRs during the definite breakup ($\beta=.57$, $SD=.07$, $p<.001$). Stronger PSRs increased subsequent PSRs during the definite breakup ($\beta=.36$, $SD=.07$, $p<.001$), partially confirming H3. PSRs before the release and PSB distress explained 60% of the PSR variance during the definite breakup.

Comparing the Three Breakup Types (RQ1)

Viewers' PSRs and PSB distress before and during temporary, uncertain, and definite breakups were compared (Table 7). First, PSR strength before and after were compared for each type of breakup. For temporary and uncertain breakups, PSRs did not differ before and after the breakup. During a definite breakup ($t=-2.52$, $p=.013$, $df=141$), viewers indicated significantly

stronger PSRs ($M=3.12$, $SD=.95$, $n=142$) than before the definite breakup ($M=2.97$, $SD=.92$, $n=142$).

Second, PSB distress before and after each type of breakup was compared. For uncertain and definite breakups, there were no differences in PSB distress before and after the breakup. Interestingly, viewers' PSB distress before the temporary breakup ($M=2.26$, $SD=.72$, $n=142$) was significantly stronger ($t=3.23$, $p=.002$, $df=141$) than during the temporary breakup ($M=2.08$, $SD=.80$, $n=142$). This shows that, in addition to the type of breakup, the time at which PSB distress is measured is also relevant. Still, no clear patterns could be found for the relationship between PSR and PSB distress for the three breakup types overall (RQ1).

Viewers' Alternative Activities During a Breakup (RQ2)

After having watched the new seasons, viewers were asked to choose from a list of 12 activities the alternative activities they engaged in more (Table 8). For temporary breakups, they chose media and non-media activities. Half indicated they would watch other series. Other preferred activities were spending time with friends/family (35%), reading books/magazines (34%), watching TV in general (32%), watching movies (32%), or browsing the Internet (30%). For uncertain breakups, viewers most often indicated watching other series (41%), followed by watching TV in general (35%), watching movies (32%), reading books/magazines (31%), browsing the Internet (30%), and listening to music (30%). Besides reading, alternative media use dominated as an alternative activity during the uncertain breakup. During definite breakups, watching other series (49%) was chosen most often, followed by browsing the Internet (37%) and watching TV in general (36%). Overall, viewers seemed to engage in watching other series more often after finishing a show, regardless of the type of breakup. Re-watching old episodes of the series was an activity only about 20% of the viewers engaged in during all three types of breakups.

General Discussion

Viewers develop meaningful relationships with media characters through mediated encounters (Tukachinsky et al., 2020). These PSRs (e.g., Gleich, 1996; Tukachinsky, 2011), and their dissolution (e.g., Eyal & Cohen, 2006), are often compared to social relationships. After a PSB, viewers experience similar emotional distress as after the dissolution of a friendship (Cohen, 2004). Research has focused on two types of PSB, namely definite breakups, when the dissolution is final, and temporary breakups, when viewers must wait until they can continue their mediated relationship (Hu, 2023). This paper considered viewers' autonomy over parasocial encounters on streaming platforms and introduced uncertain PSBs, which occur when viewers must endure uncertainty over their PSRs after the release of a new season because it is unclear if and when new episodes will be released.

The research presented in Study I and Study II adds to the existing literature in three ways. First, with uncertain breakups, a third type of PSB was introduced in addition to definite (Cohen, 2003) and temporary breakups (Lather & Moyer-Guse, 2011). Second, the three types of breakups were analyzed in two studies, allowing a direct comparison between their effects on viewers. Third, the analysis of viewers' PSRs and PSB distress considered their autonomy over the media content on streaming platforms (Granow et al., 2018) in a natural setting. Viewers could engage in their usual viewing behavior, producing high external validity. Fourth, behavioral effects were explored besides the affective effects of PSBs.

The assumption that viewers with stronger PSRs suffer more emotionally from PSBs with media characters than those with weaker PSRs was confirmed in both studies (H1). With that, the already proven relationships for definite breakups (e.g., J. Cohen, 2003; Eyal & Cohen, 2006), fictional (e.g., Eyal & Cohen, 2006; Lather & Moyer-Guse, 2011) and non-fictional media characters (e.g., Bingaman, 2022; Siegenthaler et al., 2021), and different settings, such as self-chosen breakups (e.g., Bond & Calvert, 2014; Hu, 2016; Hu et al., 2018) or forced

breakups due to the show ending (e.g., Ellithorpe & Brookes, 2018; Eyal & Cohen, 2006), was proven for uncertain breakups as well. Additionally, Lather and Moyer-Gusé's (2011) findings on temporary breakups could be confirmed. These findings underline the importance of considering viewers' emotional reactions, even if the breakup is temporary or uncertain. For example, producers need to gauge viewers' possible reactions when creating media content with multiple parts.

The dissolution of PSRs is often compared to that of social relationships (Cohen, 2003, 2004). The finding that lonely viewers suffer more from a definite PSB (Eyal & Cohen, 2006) was re-analyzed (H2). In Study I, lonely viewers had the strongest relationship between PSRs and PSB distress, but only for temporary breakups. In Study II, loneliness did not influence PSB distress or the PSR–PSB distress relationship in any of the three breakups. The results showed that viewers' PSRs are a strong indicator of PSB distress, despite their level of loneliness. More research is needed to see if other personality traits, such as viewers' attachment style, should be considered (e.g., Barbara & Dion, 2000; Cohen, 2004).

In Study II, the influence of viewers' PSRs on their subsequent breakup distress and PSRs were analyzed (H3). For all three types of breakups, it was shown that viewers' PSR before a new season's release increased breakup distress after finishing the season. Against the assumption, breakup distress led to stronger subsequent PSRs. These initial findings for PSR and PSB distress development over time are essential. PSRs are considered a dynamic concept (Klimmt et al., 2006); however, they are often analyzed at only a single point in time. Because they can develop beyond media exposure (Dibble et al., 2016), considering their long-time development is crucial. Future research should analyze PSRs' progression over time, as in social relationship research (e.g., Knapp et al., 2014; Levinger, 1980), such as by empirically examining the theoretical model of the development of PSRs based on relationship

development (R. Tukachinsky & Stever, 2019) while considering viewers' uncertain, temporary, and definite PSBs.

Viewers' PSR and PSB distress intensity before and during a breakup were compared for the three PSB types (RQ1). In Study I, viewers' breakup distress was stronger after a definite breakup than during a temporary breakup, although this could not be replicated in Study II. Viewers' PSB distress during a definite breakup was not stronger than during a temporary breakup, but their level of PSRs differed. During a temporary breakup, they indicated lower PSRs than during a definite breakup. This is important to consider, as it shows that a breakup can strengthen a mediated relationship. In future studies, it would be important to see their development over time; Do viewers only experience strong PSR directly after the beginning of the definite breakup, or is their level of PSR stable even over a longer time with no new content with the media character? A second interesting result for RQ1 in Study II was that *Emily in Paris* viewers indicated stronger temporary breakup distress just before the release of the new season than after it. In both cases, they experienced temporary breakup distress. In the first case, they knew that new episodes would soon be released, which, interestingly, resulted in stronger emotional distress than when they finished the new episodes and were at the beginning of a temporary breakup.

Viewers' behavioral reactions to breakups were only analyzed in Study II (RQ2), and they were asked which activities they would engage in more after finishing the new season. They supplemented with media activities, especially during uncertain and definite breakups. During temporary breakups, they also indicated non-media activities such as spending time with friends/family. During all three breakup types, watching other series was the most preferred activity. These results add to the literature. The consideration of viewers' current possibilities with self-determined viewing practices on streaming platforms expands existing knowledge of the behavioral effects of PSB (Lather & Moyer-Guse, 2011), underlining the

importance of media activities as alternatives. This also highlights that viewers did not cut social tasks while watching the new season and, after that, wanted to reinstate the usual level of social contact. It would be interesting to see if this effect would be different, for example, for fan groups or individuals with a strong show affinity (Lather & Moyer-Guse, 2011).

During all three types of breakups, the most preferred alternative activity was watching other series, although old episodes of the same series were not often watched. This is somewhat surprising because re-watching old episodes would take little effort in the current media environment. Using DVD boxes to binge-watch or re-watch favorite series could also be done during linear television, but mostly only fans chose to do so (Granow et al., 2018; Jenner, 2014). That viewers rather watch other series than re-watch old episodes is an important finding. It suggests that new actions and content with the media character are necessary for viewers to develop their PSRs. It seems that the emotional distress of the PSB is not from the lack of being able to have parasocial encounters. Viewers need new content to develop their relationships and, with that, overcome the emotional distress. It is also possible that the viewers' distress was not intense enough. As in other studies (Eyal & Cohen, 2006), viewers' breakup distress was low in both studies for all breakup types. It would be interesting to see if viewers experiencing intense breakup distress engage more in re-watching old episodes to keep their relationship with the media character ongoing.

Overall, temporary, uncertain, and definite breakups differ slightly regarding their affective and behavioral effects on viewers. This is interesting because, from a theoretical perspective, the three breakup types differ in their predictability level, and predictability is essential for relationship development with media characters (Klimmt et al., 2006) and with friends (Berger & Calabrese, 1975; Knobloch, 2015). In future research, the role of predictability and viewers' management of uncertainty in their relationships should be explored further. Applying theories from social relationships, such as uncertainty reduction theory

(Berger & Calabrese, 1975; Knobloch, 2015) or uncertainty management theory (Brashers, 2001), could be helpful to understand better viewers' engagement in their PSRs, especially when they endure uncertainty.

General Outlook and Future Research

This paper offers several implications or suggestions for future studies. First, this research analyzed viewer PSR in the sense of friendship with a media character. In future studies, it would be interesting to analyze also other types of relationships between viewers and media characters. For example, the effect of different types of parasocial breakups on viewers' romantic PSRs (Liebers & Straub, 2020; R. Tukachinsky, 2011) and their development could be assessed. It would be interesting to explore whether the effects of uncertainty in PSBs differ between romantic and friendship PSRs. Other forms of viewer involvement with media characters, such as identification or fandom (Brown, 2015), could also be analyzed in relation to PSBs. Second, this paper only considered the fictional media characters the viewers developed PSRs with, and not the actors or actresses. One part of the parasocial breakup distress scale is the continued relationships with the actor or actress of the media character. In future studies, it would be important to consider viewers' engagement with the actors also in other productions. For example, as an alternative activity, it could include watching other shows with the same actor or actress or following them on Social Media. Third, experimental studies creating the three different types of breakups would add to the literature about PSBs. By experimentally manipulating the types of breakups with the same media content, the results could be compared without the influence of possible confounding variables that were present in this field studies in Study I and Study II.

General Limitations

This paper has several limitations. First, the high external validity has drawbacks. In Study I, some samples were relatively small, since data collection had to be stopped earlier than

planned. In Study II, the samples were larger and more balanced; however, there was still a dropout rate between the first and the second survey. If the participants of the first survey had not watched the new season in time, they could not participate in the second. The final sample would likely constitute more motivated viewers. This needs to be considered when interpreting results that could differ from a broader sample, constituting viewers with lower engagement with the series and the media characters.

Second, Study II did not fully consider the temporal order between PSRs and PSB distress. In the mediation model of H3, viewers' PSB distress (mediator) and PSRs (dependent variable) were measured in the second survey after the new seasons' release. Thus, causality cannot be proven. It could be that viewers' PSRs after finishing the new seasons influenced their breakup distress at this time. It would be interesting for future studies to measure viewers' PSRs and PSB distress over a longer period, thereby considering other factors, such as the development of their PSB distress when an uncertain breakup turns into a temporary or definite one due to a new future series announcement.

Third, the three PSB types were analyzed with five fictional protagonists of popular television series. Three popular series covering different genres and suitable characters were chosen in both studies. Still, generalization of the results is not possible. In future studies, it would be necessary to analyze these effects in other settings. For example, temporary, uncertain, and definite breakups with non-fictional media characters could be compared in future studies, or the analysis could be expanded by including different formats, such as talk shows or reality TV shows.

Fourth, the new seasons' content was not considered. For example, when comparing a viewer's PSR with a media character, it could be important to consider the character's behavior. If the viewer had a positive relationship with this character and indicated so in the first survey, but the character did something they disliked in the new season, they could indicate a lower

PSR because of that behavior and not due to the type of breakup. Thus, in future studies, it would be fruitful to explore components of the content that would be important to include in future analyses.

General Conclusion

This paper contributes to the literature by introducing a new type of PSB and comparing the three types. Viewers' PSRs and PSB distress were analyzed in a natural setting, respecting their new autonomy over media content on streaming platforms, and with that, over their parasocial encounters. The results show that viewers experience PSB distress without permanent loss and in uncertain situations. Differences emerged between temporary, uncertain, and definite breakups, for example, considering viewers' loneliness in the relationships between PSRs and breakup distress. For all types of breakups, stronger PSRs increase viewers' emotional distress, which in turn influences subsequent PSRs. Additionally, this paper explored the alternate activities viewers engaged in to overcome their breakup after finishing a new season, finding that they most often engaged in media-related activities, especially watching other series. The results emphasize the importance of considering all three breakup types and differentiating them when analyzing the dissolution of PSRs.

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Tables

Table 1

Overview of the descriptive statistics and scale reliabilities for study I.

	loneliness			parasocial relationships			parasocial breakup distress		
	<i>M</i>	<i>SD</i>	α	<i>M</i>	<i>SD</i>	α	<i>M</i>	<i>SD</i>	α
Emily in Paris									
pre release	1.88	.77	.91	2.64	1.04	.92	1.95	.82	.81
post release	2.31	.77	.88	2.58	1.04	.92	2.26	.92	.83
Bridgerton									
pre release	1.94	.79	.91	2.55	.86	.88	1.5	.53	.79
post release	1.43	.48	.84	2.48	1.17	.95	1.71	.94	.90
Peaky Blinders									
pre release	1.70	.64	.85	2.81	.94	.85	1.72	.88	.89
post release	2.07	.89	.92	2.67	1.1	.90	2.02	.92	.82

Note. α = Cronbach's Alpha. Mean indices, constructs measured on a 5-point Likert scale.

Table 2

Influence of parasocial relationships and loneliness on breakup distress.

	<i>B</i>	<i>SE B</i>	<i>t</i>	<i>p</i>	<i>95% CI</i>
temporary breakup distress^a					
parasocial relationships	.20	.12	1.76	.080	[-.025, .434]
loneliness	-.14	.16	-.90	.37	[-.455, .169]
interaction effect	.11	.05	2.02	.044	[.003, .215]
low loneliness*PSR	.32	.07	4.91	<.001	[.194, .455]
medium loneliness*PSR	.38	.05	7.52	<.001	[.280, .478]
high loneliness*PSR	.50	.06	8.37	<.001	[.380, .614]
uncertain breakup distress^b					
parasocial relationships	.50	.21	2.35	.022	[.074, .919]
loneliness	.06	.32	.19	.851	[-.579, .700]
interaction effect	-.02	.10	-.16	.873	[.253, 1.056]
definite breakup distress^c					
parasocial relationships	.29	.17	1.75	.083	[-.039, .626]
loneliness	.08	.22	.38	.709	[-.356, .521]
interaction effect	.05	.07	.77	.444	[-.083, .187]

Note. Interaction effect: PSR and loneliness. Conditional effects are only indicated when significant. ^a $R^2 = .33$ ($p < .001$); $n = 244$. ^b $R^2 = .50$ ($p < .001$); $n = 64$. ^c $R^2 = .36$ ($p < .001$); $n = 92$. As the samples of the studies differed, the show was entered as a control variable for temporary and uncertain breakups.

Table 3

Comparison of strength in parasocial relationships and breakup distress after different types of breakups.

	type of breakup						<i>p</i>	t	df
	temporary			uncertain ^a /definite ^b					
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>			
Emily in Paris^a									
parasocial relationships	.64	.04	1	.58	1.04	37	.751	.32	106
breakup distress	.95	.82	1	.26	.92	37	.077	1.79	105
Bridgerton^a									
parasocial relationships	.55	.86	7	.27	.95	42	.083	.74	137
breakup distress	.50	.54	7	.53	.68	42	.800	-.25	136
Peaky Blinders^b									
parasocial relationships	.81	.94	7	.67	1.10	99	.349	.94	194
breakup distress	.72	.88	7	.02	.92	99	.019	-2.37	193

Note.^aComparison between temporary and uncertain, ^btemporary and definite breakup. T-tests for independent samples.

Table 4*Overview of the descriptive statistics and scale reliabilities for study II.*

	loneliness			parasocial relationships			parasocial breakup distress		
	<i>M</i>	<i>SD</i>	α	<i>M</i>	<i>SD</i>	α	<i>M</i>	<i>SD</i>	α
Emily in Paris									
pre release	2.18	.96	.94	3.03	.95	.92	2.12	.80	.81
post release	2.12	.96	.94	2.96	1.01	.93	2.08	.80	.83
Shadow and Bone									
pre release	2.37	.96	.93	3.03	.87	.89	2.29	.70	.83
post release	2.30	.94	.92	3.19	.95	.90	2.25	.83	.89
Never Have I Ever									
pre release	2.19	.87	.91	3.03	.90	.89	2.30	.92	.86
post release	2.09	.90	.92	3.12	.95	.92	2.22	.85	.81

Note. α = Cronbach's Alpha. Mean indices, constructs measured on a 5-point Likert scale.

Table 5

Influence of parasocial relationships and viewers' loneliness on temporary, uncertain and definite breakup distress.

	<i>B</i>	<i>SE B</i>	<i>t</i>	<i>p</i>
<i>temporary breakup distress^a</i>				
parasocial relationships	.44	.07	6.76	<.001
<i>temporary breakup distress^b</i>				
parasocial relationships	.43	.15	2.85	.005
loneliness	.09	.20	.43	.671
interaction effect	.00	.07	.04	.965
<i>uncertain breakup distress^c</i>				
parasocial relationships	.24	.11	2.11	.038
<i>uncertain breakup distress^d</i>				
parasocial relationships	.62	.32	1.95	.055
loneliness	.67	.43	1.57	.120
interaction effect	-.17	.13	-1.30	.198
<i>definite breakup distress^e</i>				
parasocial relationships	.50	.07	7.65	<.001
<i>definite breakup distress^f</i>				
parasocial relationships	.61	.16	3.84	<.001
loneliness	.16	.20	.81	.422
interaction effect	-.05	.07	-.73	.466

Note. Temporary breakups: ^a $R^2 = .24, p < .001, F(1,140)=45.63; n = 142$. ^b $R^2 = .26, p < .001, F(3,138)=16.03; n = 142$. Uncertain breakups: ^c $R^2 = .04, p = .038, F(1,93)=4.44; n = 94$. ^d $R^2 = .08, p = .067, F(3,90)=2.47; n = 94$. Definite breakups: ^e $R^2 = .29, p < .001, F(1, 140)=58.57; n = 140$. ^f $R^2 = .31, p < .001, F(3, 136)=19.76; n = 140$. Interaction effect: PSR and loneliness. Conditional effects are not indicated as $p > .05$.

Table 6*Relationship between parasocial relationship intensity before and during a parasocial breakup.*

	<i>M: breakup distress^a</i>			<i>DV: parasocial relationships (post)^b</i>		
	<i>B</i>	<i>SE B</i>	<i>p</i>	<i>B</i>	<i>SE B</i>	<i>p</i>
<i>temporary breakup distress</i>						
parasocial relationships (pre)	.44	.07	<.001	.68	.06	<.001
breakup distress				.39	.07	<.001
<i>uncertain breakup distress</i>						
parasocial relationships (pre)	.24	.11	.038	.40	.10	<.001
breakup distress				.43	.09	<.001
<i>definite breakup distress</i>						
parasocial relationships (pre)	.50	.07	<.001	.57	.07	<.001
breakup distress				.36	.07	<.001

Note. Temporary breakup distress: $n = 142$, $^aR^2 = .25$, $p < .001$, $F(1,140)=45.63$. $^bR^2 = .66$, $p < .001$, $F(2,139)=131.93$. Indirect effect: $B = .17$, $CI[.097, .256]$. Uncertain breakup distress: $n = 95$, $^aR^2 = .05$, $p < .001$, $F(1,93)=4.44$. $^bR^2 = .37$, $p < .001$, $F(2,92)=26.56$. Indirect effect: $B = .10$, $CI[-.007, .233]$. Definite breakup distress: $n = 142$, $^aR^2 = .30$, $p < .001$, $F(1,140)=58.57$. $^bR^2 = .60$, $p < .001$, $F(2,139)=105.12$. Indirect effect: $B = .18$, $CI[.108, .256]$.

Table 7

Comparison of parasocial relationships and breakup distress intensities for the three types of breakup distress.

	type of breakup						<i>p</i>	<i>t</i>	<i>df</i>
	before temporary			during temporary					
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>			
parasocial relationships	2.96	.91	142	2.96	1.01	45	.887	-.14	141
breakup distress	2.26	.80	142	2.08	.80	45	.002	3.23	141
	before uncertain			during uncertain			<i>p</i>	<i>t</i>	<i>df</i>
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>			
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>			
parasocial relationships	3.16	.84	96	3.17	.96	97	.957	-.05	94
breakup distress	2.21	.75	96	2.20	.93	97	.869	.17	94
	before definite			during definite			<i>p</i>	<i>t</i>	<i>df</i>
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>			
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>			
parasocial relationships	2.97	.92	142	3.12	.95	142	.013	-2.52	141
breakup distress	2.22	.86	142	2.22	.85	142	.987	.02	141

Note. t-tests for dependent samples for each of the three samples. temporary – temporary: *Emily in Paris*. temporary – uncertain: *Shadow and Bone*. temporary – definite: *Never Have I Ever*.

Table 8*Activities viewers engage in more during temporary, uncertain, and definite breakups.*

activities	temporary		uncertain		definite	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
exercising / sports	42	29%	24	25%	34	24%
reading books / magazines	49	34%	30	31%	37	26%
studying / working	40	28%	22	23%	34	24%
spending time with friends or family	51	35%	25	26%	43	30%
watching other series	73	50%	40	41%	69	49%
watching TV in general	47	32%	34	35%	51	36%
browsing the Internet	43	30%	29	30%	52	37%
listening to music	42	29%	29	30%	44	31%
re-watch old episodes of the series	30	21%	18	19%	29	20%
watching movies	46	32%	31	32%	46	32%
talking to friends or family	37	26%	20	21%	45	32%
browsing Social Media	39	27%	22	23%	43	30%

Note: Viewers were asked to choose all the activities they will engage more in after having finished watching the new season. The numbers and percentages indicated refer to the viewers who have chosen this activity. The total number of chosen activities for temporary breakups ($M=4.45$, $SD=2.76$), uncertain breakups ($M=3.81$, $SD=2.41$), and definite breakups ($M=4.93$, $SD=3.10$).

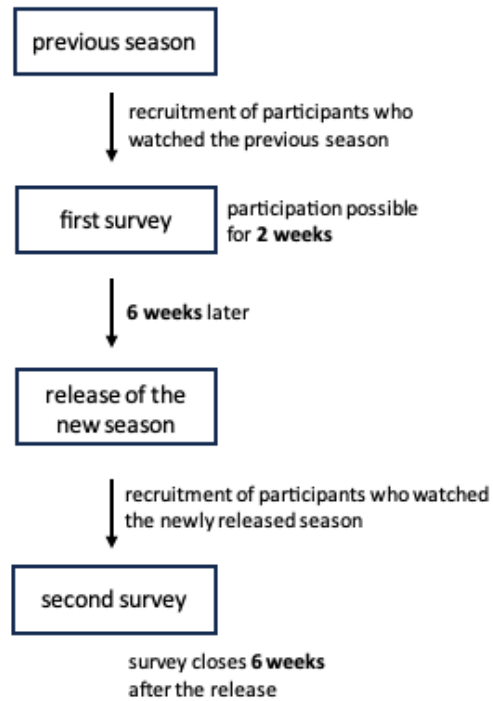


Figure 1: Overview of the procedure of Study I (independent samples).



Figure 2: Overview of the procedure of Study II (dependent samples).

5.4 Article IV: Measuring Parasocial Processing: The Development and Validation of a Multidimensional Short Scale

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Open data: The pre-registration, material, code, and supplemental material of this study can be found on OSF: <https://bit.ly/4cB7T8B>

Abstract: Parasocial processing (PSP) describes media users' deep psychological involvement with media characters. Consisting of cognitive, affective, and conative processing, PSP applies a broad multidimensional perspective to media users' engagement with media characters. Prior to this study, there was no validated short scale for measuring media users' PSP in empirical studies; thus, this methodological research aimed to overcome this gap. Beginning with Hartmann and Schramm's (2008) 112-item PSI Process Scales and incorporating a review of previous research, the scale development progressed through three preregistered studies that involved 500 participants each and combined exploratory (Study I) with confirmatory factor analysis (Study II and III). The results yield robust and coherent empirical evidence that the resulting PSP Short Scale validly assesses media users' PSP as a multidimensional concept by capturing the cognitive, affective, and conative processing of a mediated encounter. Accordingly, this paper proposes a nine-item PSP Short Scale that enriches parasocial research by providing an ecologically applicable scale for assessing media users' processing of mediated encounters during media exposure more broadly than has been possible with existing measures.

Keywords: parasocial processing, parasocial interactions, parasocial relationships, scale development, scale validation

Investigating parasocial experiences with media characters has a long tradition in media and communication research (Liebers & Schramm, 2023).⁴ Those contacts between media users and characters are important, for example, in understanding media use in general (e.g., Hartmann et al., 2016; Klimmt et al., 2006), enjoyment (e.g., Rosaen & Dibble, 2017; Schluetz et al., 2020), prolonged exposure (e.g., Erickson et al., 2019; Tukachinsky & Eyal, 2018), and persuasive effects in health communication (e.g., Brown & Basil, 2010; Hoffner & Cohen, 2023), marketing (e.g., Jin & Ryu, 2020; Sokolova & Kefi, 2020), and political communication (Cohen & Holbert, 2021; Kelly et al., 2020). As parasocial experiences permeates many aspects of media and communication research, scholars have approached parasocial experiences from various angles (for an overview, see Liebers & Schramm, 2019; Schramm et al., 2022), which has resulted in an abundance of theoretical and empirical differentiations between concepts related to parasocial experiences (Dibble et al., 2016). Due to conceptual overlaps, different definitions, and the inconsistent or even interchangeable use of terms, the need for better theoretical clarification and a framework for conceptualizing parasocial experiences has increasingly been identified as a focal challenge in recent decades (e.g., Dibble et al., 2016; Giles, 2002; Tukachinsky et al., 2020).

One aspect of parasocial experiences is concerned with media users' experiences of parasocial interactions (PSI; Hartmann, 2023; Hartmann & Goldhoorn, 2011b). PSI describes a media users' illusion of being in a reciprocal social interaction with a media character during media exposure (Hartmann & Goldhoorn, 2011b). In contrast, parasocial relationships (PSRs) focus on enduring bonds that media users develop with media characters, similar to social friendships (Dibble et al., 2016; Eyal & Dailey, 2012). PSRs are long-term relationships that

⁴ In the following we use the term parasocial experiences as umbrella term for all parasocial phenomena (Tukachinsky Forster, 2023, p. 2) discussed in this paper, such as parasocial interactions, relationships, or processing.

develop beyond the instance of media exposure (Tukachinsky, 2011). As in social interactions and relationships, when media users engage with media characters, there is significant room for processes other than the feelings of being in an interaction (PSI) or in a relationship (PSR) to occur. Therefore, the term parasocial processing (PSP) was introduced to cover users' broad psychological involvement with media characters during media exposure (Hartmann, 2008; Schramm & Hartmann, 2008). PSP is broader than both PSI's focus on the illusion of interaction and PSR's focus on media users' relationships. This concept offers a more holistic and multidimensional perspective of parasocial experiences by acknowledging that media users may react to characters cognitively, affectively, and conatively (Klimmt et al., 2006; Schramm & Hartmann, 2008).

Although investigating PSP is a highly relevant scientific and practical endeavor, the ability to measure this concept accurately has remained elusive (Dibble et al., 2023). Schramm and Hartmann's (2008) PSI Process Scales provide a useful starting point. This measure operationalizes PSI "as parasocial processing" (Schramm & Hartmann, 2008, p. 387), and the scales comprise a total of 112 items, which is impractical for application in empirical research. In applied studies, the item subsets are often selected arbitrarily or without sufficient justification, which makes comparing the results of such studies difficult, if not impossible (Dibble et al., 2023). At the same time, the factorial structure of PSP in general has – to the best of our knowledge – never been validated; thus, the structural validity of the scale remains uncertain. Furthermore, it remains unclear how PSP and its cognitive, affective, and conative components are most effectively operationalized and how they are related both to each other and to other accounts of media users' processing of media characters (i.e., PSR) and content (i.e., transportation). Thus, the theoretically acclaimed multidimensionality of PSP, the boundaries between its subdimensions, and their relations to other parasocial experience

concepts require further clarification. Finally, a validated short scale that can be used economically in empirical research is desirable.

The goal of this paper is to address these challenges. First, based on previous research regarding the definition and conceptualization of PSP, we theoretically derive and then test a pool of 24 items aimed at encapsulating the three-dimensional concepts of cognitive, affective, and conative PSP. Subsequently, we condense and validate a nine-item short scale over the course of the three preregistered studies, each of which involved 500 US participants recruited using census-representative quotas. Through a combination of exploratory factor analysis (EFA) and confirmatory factor analysis (CFA), we find robust empirical evidence that this nine-item short scale offers a valid and practical measurement of PSP.

PSP as a Multidimensional Concept of Parasocial Experiences

In early research, parasocial experiences were barely distinguished from each other (Dibble et al., 2016; Liebers & Schramm, 2023). While extant research has been conducted under the “PSI” label, most studies have not researched PSI empirically. This is due in part to the use of Rubin and colleagues’ PSI Scale (R-PSI; Rubin et al., 1985; Rubin & Perse, 1987), which was later proven to measure long-term relationships with media characters better understood as PSR (Dibble et al., 2016). Meanwhile, more precise conceptual definitions and matching measurements were established for PSI and PSR. PSI dates back to Horton and Wohl’s (1956) original definition of PSI as the illusion of being in an interaction with a media character, and it can be measured using the Experience of Parasocial Interactions Scale (Hartmann & Goldhoorn, 2011b). PSR is defined as the long-term friendship-like relationships that media users have with media characters and can be measured using the Parasocial Friendship Scale (Tukachinsky, 2011). This research area, however, lacks a practical short measurement that encapsulates PSP’s multidimensionality.

To develop a suitable measurement of PSP that respects its multidimensionality, the overall concept and its components must first be defined from a theoretical perspective. PSP is defined “as the degree to which the individual interacts psychologically with a media character” (Schramm & Hartmann, 2008, p. 388), and it encompasses several psychological processes related to media characters, ranging from media users’ perceptions of the media character to the elaborated processing of their behaviors or thoughts (Hartmann, 2008). PSP is assumed to set in “immediately and rather automatically once a persona is encountered (Schramm & Hartmann, 2008, p. 388).” PSP is a multidimensional concept that encapsulates cognitive, affective, and conative processes that may occur as a response to encounters of media characters (Klimmt et al., 2006). The following definitions are based on the most widely accentuated features of cognitive, affective, and conative PSP.

Cognitive PSP encompasses processes linked to thinking about a media character and, more concretely, revolves around media users’ information processing of a mediated encounter with a media character (Hartmann et al., 2004). Cognitive PSP occurs when media users concentrate their attention on a media character during an instance of media exposure, but it is not restricted to these moments of concentration (Klimmt et al., 2006). Rather, users’ knowledge is often essential, such that they intensively think about the media characters and their actions (Schramm & Hartmann, 2008). This kind of thinking is not restricted to the characters’ previous or present actions, but also extends into the future and integrates considerations of how This media character and their circumstances will evolve (Klimmt et al., 2006). Comparisons between self and persona have often been discussed in the context of PSP’s cognitive components (e.g., Hartmann et al., 2004; Klimmt et al., 2006). However, since these comparisons are often bound to personas with whom users maintain strong relations, and since these relations are primarily grounded in affective processes (Dibble et al., 2016; Tukachinsky et al., 2020), such comparisons do not fall within the domain of cognitive PSP in a narrower

sense. Rather, they should fall somewhere between the concept's cognitive and affective components.

Affective PSP refers to the emotional reactions that media characters trigger in media users (Schramm & Hartmann, 2008). More specifically, media users often feel emotions that are similar to or essentially the same as those of the media characters (Klimmt et al., 2006). These emotions may be positive or negative (Tukachinsky Forster & Click, 2023); for instance, media users may feel happiness or sadness in response to the media character's experience of the same emotions. Such a transfer of emotions from characters to media users does not presuppose strong cognitive engagement with this character (Hartmann et al., 2004). In the sense of mood contagion, the transfer is often a rather automatic and spontaneous process (Schramm & Hartmann, 2008). At the same time, such affective processing prototypically translates into empathy such that media users feel compassion for the media character (Hartmann et al., 2004).

Conative PSP concerns behavioral reactions to a mediated encounter with a media character (Schramm & Hartmann, 2008). What separates these reactions from other types of media-related behaviors (e.g., next-day interpersonal follow-up talk) is that these behaviors are direct reactions to the persona's behaviors that occur during or in the immediate aftermath of media exposure (Klimmt et al., 2006). Conative PSP does not require that media users intend to behave, only that they exhibit actual behaviors. Indeed, conative PSP frequently refers not to purposefully planned actions but to spontaneous, automatic, or impulsive behaviors, the nature of which may be either verbal (i.e., shouting at the persona) or nonverbal (i.e., mimicking or gestures; Hartmann et al., 2004).

Considering the vast variety of characters who appear in today's high-choice media environments, PSP addresses media and communication researchers' need for broad accounts of media users' reactions to media characters. In the literature, other concepts have emerged to

describe media users' processing of media characters and content, including identification and transportation. While PSP describes users' processing of a media character, identification is characterized by media users' merging and role-taking with a media character (Cohen, 2001). Transportation focuses more on users' processing of the whole story (Green et al., 2004), while PSP focuses on their processing of individual media characters (Schramm & Hartmann, 2008). Overall, PSP's most foundational contribution to the media and communication literature is that it facilitates a more holistic and differentiated account of media users' cognitive, affective, and conative processing of media characters.

Associations Between Cognitive, Affective, and Conative PSP, Each Other, and Other

Forms of Parasocial Experiences

Defining and conceptualizing the components of multidimensional concepts like PSP is one important matter; their associations between each other and with other concepts of users' media character processing are another. Recent methodological research demonstrates that it is not enough to examine how many factor scales combine to establish multidimensionality. Beyond traditional scale evaluation procedures (e.g., Abdulla et al., 2004), it is also essential to consider how strongly these factors are correlated with each other. Arguably, multidimensionality does not require factors to be perfectly independent. Indeed, positive correlations among them are often an essential empirical indication that the factors represent different components of the same overarching concepts rather than entirely separate concepts (Kohring & Matthes, 2007). Nevertheless, the factors should not be too strongly correlated or – more methodologically speaking – exhibit more specific variance than they share with each other (e.g., Mangold, 2023; Prochazka & Schweiger, 2019; Yale et al., 2015). Likewise, one of the most foundational reasons for operating with multidimensional concepts instead of less complex, one-dimensional ones (often measurable with few items) is that they should allow us to differentiate the understanding of phenomena. Therefore, from a practical standpoint, it is

only feasible to operate with such concepts when their components demonstrate differential associations with other concepts (Strömbäck et al., 2020). This is the case for PSP's association with other concepts that describe media users' processing of media characters and content, such as PSR, R-PSI, PSI, identification, and transportation.

Following these methodological perspectives, the relationships between the three components of PSP and their relationships with other concepts relating to the processing of media content must be clarified to test the scale's validity. Previous research has made the plausible theoretical case that cognitive, affective, and conative PSP constitute PSP's "building blocks" (Klimmt et al., 2006, p. 297), but that they do not inevitably co-occur (Schramm & Hartmann, 2008). For example, for media users to strongly engage in cognitive PSP, they do not necessarily have to engage in affective or conative PSP. At the same time, cognitive PSP is a prerequisite for users to engage in affective and conative PSP. In other words, media users' must pay attention to the media character to initiate affective or conative PSP (Klimmt et al., 2006). In conjunction, these theoretical considerations inform the following reference assumptions that underlie the empirical validation of our proposed measures. When validly assessed, cognitive, affective, and conative PSP should not just exhibit discriminant validity (i.e., exhibit more specific variance than they share with each other; Hair et al., 2010; Kline, 2005). Cognitive, affective, and conative PSP should be positively associated, and the associations between cognitive PSP and both affective PSP and conative PSP should be stronger than those between affective and conative PSP.⁵ Besides these correlations between the three PSP components, it is essential to consider their relationships with other concepts related to media characters or content processing in the context of scale development and validation.

⁵ While the circumstance of cognitive, affective, and conative PSP sharing only a minority of their variance with each other provides empirical evidence of discriminant validity, the circumstance of the associations of cognitive PSP with affective and conative PSP being stronger than the association of affective and conative PSP offers additional evidence of nomological validity.

Based on the definitions outlined above, we identified several theoretically plausible relationships:

–PSR describes media users’ feelings of friendship, emotion, and affection toward a media character (Dibble et al., 2016; Tukachinsky, 2011). Based on PSR’s focus on affective processes between media users and characters, PSR’s association with affective PSP should be stronger than its associations with cognitive and conative PSP.

–Rubin et al.’s conceptualization of PSI (R-PSI) focuses on media users’ impressions of being in a long-term relationship with the media character see also Rubin & Perse, 1987). Despite its name, the R-PSI has been proven to measure PSR (Dibble et al., 2016). Therefore, R-PSI should be more strongly correlated with affective PSP than with cognitive and conative PSP.

–Identification occurs when media users’ merge and role-take with a character (Cohen, 2001), and it requires a strong connection between media users and characters (Cohen, 2006). Affective processing is essential to identification, as is cognitive processing, which facilitates users’ experience of merging merging with the character and taking their perspective (Cohen, 2001). Identification should therefore strongly correlate with both affective and cognitive PSP.

–Transportation refers to media users’ cognitive engagement with the narrative world and involves media users’ cognitive processing of the story (Green et al., 2004). Transportation thus shares the focus of cognitive PSP with users’ processing processing of a media character (Hartmann, 2008). Therefore, transportation should foremost show a strong correlation with cognitive PSP.

–PSI focuses on media users’ perceptions of characters’ behavioral responses to their presence, for example, the perception that a media character has reacted to the user’s presence or has answered them (Hartmann & Goldhoorn, 2011b). Conative PSP is thus a

prerequisite for PSI, and PSI should show a stronger correlation with conative PSP than with cognitive PSP and affective PSP.

Overall, these theoretical reflections inform the following reference assumptions, which are used to test the nomological validity of our measures: When validly measured, affective PSP should be more strongly associated with PSR and R-PSI than with cognitive and affective PSP. Identification should be more strongly associated with affective and cognitive PSP than with conative PSP. Transportation should be more strongly associated with cognitive PSP than with affective and conative PSP. In contrast, PSI should be more strongly correlated with conative PSP than with cognitive and affective PSP.⁶

Toward a Validated Short Scale for Measuring PSP

Based on the theoretical descriptions of the three PSP components and their relationships with each other and with other parasocial concepts, we propose a new instrument to measure PSP. The PSP Short Scale aims to measure PSP as a broad, multidimensional concept using a small number of items. The development of a short scale contributes to the standardization and comparability of PSP measures and findings while enhancing their feasibility in empirical studies, thus answering an important demand raised by parasocial researchers (Dibble et al., 2023). Following the theoretical framework, items were derived based on the definitions of cognitive, affective, and conative PSP. The essential foundation of the new measure is the existing PSI Process Scales (Schramm & Hartmann, 2008). A minimum of nine items, with three for each of the three components, are required to treat them as latent concepts on the final short scale (Kline, 2005). Based on the theoretical reflections outlined above, we began development by preselecting a pool of 24 items that were later applied in the

⁶ While the overall compatibility of the empirically observed associations with the theoretical reference assumptions provides evidence of nomological validity, the relatively stronger (weaker) associations of, for example, affective PSP and cognitive and conative PSP with PSR support convergent and discriminant validity, respectively.

empirical studies (see Table 1). We initially included a larger number of items for measuring cognitive PSP than for affective and conative PSP, which reflects the structure of the original PSI Process Scales (Schramm & Hartmann, 2008).

TABLE 1 ABOUT HERE

For cognitive PSP, nine items were derived to assess different forms of media users' cognitive processing of a media character. These items measure attention to the character (Items 1–3), comprehension of the media character's situations and actions (Items 4–6), and thinking about the media character's future (Items 7–9). Despite the assumption that comparisons between media users and characters require some affective PSP and are thus not directly indicative of cognitive PSP, they were tentatively included in the short scale with three additional items (10–12).

Affective PSP is operationalized with six items that cover media users' emotional processing of a media character. The items measured media users' experiencing the media character's emotions (Items 13–14), their feelings being influenced by the media characters' mood (Items 15–16), and their compassion for the media character (Items 17–18). The items focused on an acute instance of media exposure, which differs from the long-term perspective of other concepts of parasocial experiences, such as PSR or R-PSI.

Since conative PSP describes media users' verbal or nonverbal reactions to a mediated encounter, we included six items that measure media users' mimicry (Items 19–20), verbal responses to the media character (Items 21–22), and physical gestures triggered by the media character (Items 23–24).

The items proposed for measuring PSP on a short scale are further applied in the following three empirical studies to test their validity and applicability. In Study I, all 24 selected items were applied, and the factor structure was examined. In Studies II and III, the selection of nine items derived from Study I was applied, and the scale's factor structure and

relationships to other concepts were assessed. The final result of the three empirical studies is a theoretically based and empirically validated short scale to measure PSP that includes nine items for assessing cognitive, affective, and conative PSP.

Study I

Study I aimed to provide a meaningful empirical starting point for developing a validated PSP Short Scale. Its primary goal was twofold: (a) examine whether and how the 24-item pool derived above encapsulates PSP consisting of cognitive, affective, and conative PSP, and (b) offer empirical guidance for reducing the item pool to a practical amount. For the reasons outlined above, we eventually aimed to develop a nine-item short scale that includes three items each for cognitive, affective, and conative PSP and that allows applied scholars to capture PSP efficiently and with sufficient breadth. Given the lack of prior empirical evidence regarding the factorial structure of PSP, we began with EFA (CFA was later applied to achieve the confirmatory aims of Studies II and III).

Methods

Study I was preregistered on OSF (<http://bit.ly/40wnRdf>) and ethically approved by the Institutional Review Board of the University of Fribourg (No. 2022-11-01).

Procedure and Sample

Study I was conducted in November 2022. A quantitative online survey was administered to a sample of 500 US participants recruited via the *prolific* platform using census-representative gender, age, and ethnicity quotas (US Census Bureau, 2024). Participants received a small monetary incentive (£1.72) for completing the survey. The sampling procedure followed an iterative approach, and participants were excluded from the sample whenever they (a) did not complete the survey in +/- two standard deviations from the mean time, (b) failed to complete two attention checks, or (c) self-reported restrictions in the quality of their survey responses when asked, “Have you filled out the survey carefully, and can we use your data for

analysis?” Participants who were excluded from the sample were replaced with a newly recruited participant until the target sample size (500 participants) was reached. One participant was excluded due to failed attention checks. Based on time and quality self-assessment, no other participants met the exclusion criteria. Table S1 in the Supplementary Materials shows that the sample matched the population parameters well, despite some underrepresentation of people older than 75 years and non-white people. Of the participants, 52% were female and 48% were male, with a mean age of 46.0 years ($SD = 16.5$, $MIN = 18$, $MAX = 89$). Regarding ethnicity, 77% of the participants identified as white, 13% as Black, 6% as Asian, 2% as having a mixed ethnicity, and 2% as other ethnicities.

Measures

To assess media users' PSP, we administered the full 24-item pool to all participants. Items were administered in randomized order. Responses were measured on a 5-point Likert scale ranging from 1 (“do not agree at all”) to 5 (“agree completely”) to account for gradual differences in cognitive, affective, and conative PSP (see Table S2). Prior to administering the individual PSP items to participants, they were confronted with a recall cue, which is a commonly applied procedure in parasocial research (e.g., Liebers & Schramm, 2019). The recall cue developed through two stage. First, the participants were asked to recall a media character from a series or a movie with which they had previously engaged. Second, they were instructed to recall a specific media exposure situation and then describe this situation in an open text field. This method was adopted to thoroughly activate the participants' memories of a specific media exposure situation.

Only after completing this procedure were the participants presented with the 24 PSP items. The items were adapted so that “CHARACTER” was replaced with the name of the selected character. To capture the full range between low- and high-intensity PSP, participants were randomly assigned to a recall cue that varied in valence (liked vs. neutral vs. disliked) and

intensity of engagement with the media character (low vs. medium vs. high). This approach was chosen to enhance the ecological validity of the research and prevent recall biases (Schwarz, 1999), most notably because when participants are entirely free to choose a media character, they often choose their favorite media characters (e.g., Bernhold & Metzger, 2020; Cohen, 2004; Hartmann et al., 2016; Lather & Moyer-Guse, 2011), despite actually encountering a larger variety of media characters in their everyday lives.

Results

Analyzing the results proceeded in two main steps: (1) an exploration of whether the scale empirically captured the theoretical multidimensionality of cognitive, affective, and conative PSP and (2) an examination of which items were most relevant for developing a short scale that measures PSP and its components efficiently and with sufficient breadth.

Do the Items Capture the Theoretical Distinction Between Cognitive, Affective, and Conative PSP?

The first step of the analysis was to explore whether the scale measured cognitive, affective, and conative PSP and whether another factor structure better fits the PSP concept. To this end, we conducted EFA, the main results of which are summarized in Table 2. We began by determining the number of factors to be extracted by means of the conventional criterion of Eigenvalue > 1. Following this, three factors were extracted that supported the assumption of a three-factor structure for PSP. Inspecting factor loadings produced empirical support for this assumption. As most items predominantly loaded on the factors that matched those proposed by the theoretical framework (primary loadings in bold), the three emerging factors represented cognitive, affective, and conative PSP. However, the items that measured media users' self-comparisons with the media character (Items 10-12), predominantly loaded on the affective factor, although less weakly than the items directly related to affective PSP (Items 13–18),

which aligns with our assumption that such comparisons are not primarily indicative of cognitive PSP.

TABLE 2 ABOUT HERE

Which Items Are the Most Suitable for the Purposes of a Short Scale That Captures PSP and Its Components with Sufficient Breadth?

We assessed the factor loading patterns in Table 2 in accordance with the theoretical definitions of cognitive, affective, and conative PSP outlined in the literature review. Since cognitive PSP comprises participants' attention to the character (Items 1–3), comprehension of the media character's actions and situations (Items 4–6), and thinking about the media character's future (Items 7–9), the factor loadings support the hypothesis that cognitive PSP is most effectively measured by combining Items 3, 6, and 9. Affective PSP involves sharing the media character's emotions (Items 13–14), which often happens spontaneously as the result of emotional contagion (Items 15–16) and compassion for the media character (Items 17–18). Thus, the factor loadings support the assumption that affective PSP is best captured through the combination of Items 13, 15, and 17. Conative PSP refers to mimicry, verbal reactions, and gestures. Since the items for mimicking (Items 19–20), verbal reactions (Items 21–22), and gestures (Items 23–24) had largely identical factor loadings, the results indicate that the items within the respective item pairs are largely interchangeable. More generally, this indicates that it is feasible to proceed on theoretical grounds tentatively by selecting those items that most closely reflect the core theoretical idea that PSP is a reaction to the media characters' behavior—that is, the combination of Items 19, 22, and 24.

Discussion

Study I has two main findings. First, the provided item pool is suitable for assessing PSP as a multidimensional concept. Three factors emerged that coherently aligned with the theoretically derived dimensionality of cognitive, affective, and conative PSP. Second, there

was a substantial variation in the suitability of the individual items, especially for cognitive PSP. Therefore, reducing the item pool aids the efficiency of PSP measurement and its validity. Consequently, we continued our investigation with the 9-item PSP Short Scale suggested by Study I.

Study II

Study II had two overarching goals: (a) confirm Study I's results regarding the number of factors and their content-related significance, and (b) extend the analysis by examining how reliably cognitive, affective, and conative PSP are measured, as well as how cognitive, affective, and conative PSP are associated with each other and with other accounts of users' processing of media characters and content (i.e., PSR, R-PSI, PSI, identification, and transportation). As outlined in the literature review, both types of associations comprise essential additional information about the validity of measures, including their multidimensionality. To establish compatibility, Study II replicated the sampling and measurement procedures used in Study I. Study II also expanded on the state of the art by following EFA with CFA.

Methods

Study II was preregistered (<http://bit.ly/40wnRdf>) and ethically approved by the Institutional Review Board of the University of Fribourg (No. 2022-11-01).

Procedure and Sample

Study II was conducted in January 2023. A sample of 500 US participants was recruited on *prolific* using census-representative gender, age, and ethnicity quotas (US Census Bureau, 2024). Participants received a small monetary incentive (£1.75) for completing the survey. The dataset was cleaned using the same criteria employed in Study I. Two participants were excluded due to failed attention checks, and one participant was excluded due to filling in the survey too quickly. Replacements were recruited to attain 500 participants. Based on the self-assessment, no other participants met the exclusion criteria. Table S1 shows that the sample

both matched the US population and resembled the sample in Study I, including the initial underrepresentation of people older than 75 years and non-white people. Of the participants, 51% were female and 49% were male, with a mean age of 45.9 years ($SD = 16.3$; $MIN = 18$; $MAX = 85$). Regarding ethnicity, 77% of the participants identified as white, 13% as Black, 6% as Asian, 2% as mixed ethnicity, and 2% as other ethnicities.

Measures

For consistency, we used the same recall cues (varying in valence and intensity of engagement) as in Study I, as well as the 5-point Likert scale (1 = “do not agree at all”; 5 = “agree completely”). For all measures, we captured and further evaluated PSP using the nine items derived from Study I (see Table S3). PSR was measured using Tukachinsky’s (2011) 13-item Parasocial Friendship Scale ($M = 3.0$; $SD = 1.3$; $\alpha = .97$; e.g., “CHARACTER could be a friend of mine”). We used Rubin and Perse’s (1987) 10-item version of Rubin et al.’s (1985) R-PSI ($M = 3.2$; $SD = 1.1$; $\alpha = .92$; e.g., “I see CHARACTER as a natural, down-to-earth person”). PSI was assessed using Hartmann and Goldhoorn’s (2011b) six-item scale ($M = 1.4$; $SD = 0.9$; $\alpha = .97$; e.g., “While watching, I had the feeling that CHARACTER reacted to what I said or did”). Identification was captured using Cohen’s (2010) 10-item identification scale ($M = 3.3$; $SD = 1.0$; $\alpha = .92$; e.g., “While watching, I felt I could really get inside CHARACTER’s head”). Transportation was measured using eight items from Green and Brock’s (2000) transportation scale ($M = 3.5$; $SD = 0.7$; $\alpha = .74$; e.g., “While watching, I could easily picture the events in it taking place”). The full scales for PSR, R-PSI, PSI, identification, and transportation are presented in Table S4.

Results

The analytical sequence proceeded through four main steps: (1) confirming that the scale captures three factors of cognitive, affective, and conative PSP rather than just two or

even a single factor, (2) determining how reliably these factors are captured by the respective items, and (3) inspecting the correlations among these factors and (4) their associations with other forms of media users' processing of media characters and content.

Does Our Scale Capture the Theoretical Distinction between Cognitive, Affective, and Conative PSP?

To establish that the scale captures the theoretical distinctions between cognitive, affective, and conative PSP rather than just one or two factors, we assessed the fit of five CFA models (M): a one-factor model that assumed all items measured only a single factor (M1), three alternative two-factor models that collapsed the cognitive and affective PSP items into a single factor (M2.1), collapsed the cognitive and conative PSP item into a single factor (M2.2), and collapsed the affective and conative PSP items into a single factor (M2.3); and, finally, a three-factor model (M3) that tested the assumption that the scale empirically captures the theoretical distinction between cognitive, affective, and conative PSP.

The following criteria were considered to evaluate absolute model fit: the root mean square error of approximation ($RMSEA \leq .08$), the Tucker-Lewis index ($TLI \geq .95$), the comparative fit index ($CFI \geq .95$), and the standardized root mean square residual ($SRMR \leq .08$). We also considered the Akaike information criterion (AIC), the Bayesian information criterion (BIC), and the sample-size adjusted BIC (aBIC) as summary measures of relative model fit; lower values among these statistics indicate a model with relatively better fit (e.g., Akaike, 1987; Hu & Bentler, 1999; Kline, 2005; Schermelleh-Engel et al., 2003).

TABLE 3 ABOUT HERE

According to Table 3, the results coherently supported the superiority of the three-factor model (M3). Since the AIC, BIC, and aBIC values were significantly lower than those of the other models, the CFA results confirmed that our scale measures three distinct factors of cognitive, affective, and conative PSP, as opposed to just one or two factors. Based on the CFI

and SRMR values, the three-factor model also exhibited a good absolute fit, but its RMSEA and TLI remained below the good fit threshold, albeit only slightly. Due to the scale's overall setup, this result supports the reliability of single items and factors rather than more fundamental validity issues.

How Reliably Are Cognitive, Affective, and Conative PSP Measured?

To investigate how reliably our scale measures cognitive, affective, and conative PSP, we calculated four main statistics for each of the three factors. In addition to the traditional standard of Cronbach's (1951) alpha ($\geq .70$), we considered the reliability criteria most common in CFA: composite reliability ($CR \geq .60$), average variance extracted ($AVE \geq .50$), and indicator reliability or, more statistically speaking, the minimum loading of the individual items for each factor ($\lambda_{\min} \geq .64$; e.g., Bagozzi & Baumgartner, 1994; Bagozzi & Yi, 1988; Hair et al., 2010).

TABLE 4 ABOUT HERE

The results presented in Table 4 indicate that the measures for cognitive and affective PSP exhibited good reliability. For both factors, Cronbach's alpha, CR, AVE, and indicator reliability exceeded the desired thresholds. For conative PSP, although CR also exceeded the desired threshold, Cronbach's alpha, AVE, and indicator reliability did not quite meet the desired thresholds. As revealed by the factor loadings reported in Figure 2, this occurred specifically in relation to Item 8 ("I commented out loud on CHARACTER's behavior") and Item 9 ("CHARACTER's behavior led me to gesture at him/her"). These items only loaded with $\lambda_8 = .62$ and $\lambda_9 = .60$ on the conative factor; thus, both were slightly below the minimum requirement for good indicator reliability.

FIGURE 1 ABOUT HERE

How Are Cognitive, Affective, and Conative PSP Associated with Each Other?

While the results reported above reinforced the need to improve the reliability of the conative PSP measures, the correlations between cognitive, affective, and conative PSP

coherently supported our scale's validity (Figure 1). These correlations were below $r = .70$, indicating that the factors exhibited specific variance more than they shared variance with each other, thus demonstrating that the scale supports a multidimensional account of PSP.⁷ Indeed, the correlations between cognitive PSP and affective and conative PSP were stronger than the correlations between affective and conative PSP. This result aligns with the core PSP theories and supports the validity of our measurement.

How Are Cognitive, Affective, and Conative PSP Associated with Other Measures of Users' Processing of Media Characters and Content?

The associations between cognitive, affective, and conative PSP and other measures related to users' processing of media characters and content further supported the validity and multidimensionality of our scale (Table 5). These associations were not only profoundly varied, which is desirable for comprehensive multidimensional measures, but also highly reflective of theory. As suggested by the theoretical assumptions derived from the literature review, affective PSP was more strongly associated with PSR and R-PSI than cognitive and conative PSP. While largely showing the same associations with affective PSP as with PSR and R-PSI, identification was most strongly associated with cognitive PSP. Transportation was more strongly associated with cognitive than with affective and conative PSP. Finally, PSI was more strongly associated with conative PSP than with cognitive and affective PSP. Overall, the results support the practical value of differentiating between cognitive, affective, and conative PSP, as these PSP components are uniquely aligned with other elements of parasocial experiences and users' processing of media content.

TABLE 5 ABOUT HERE

⁷ While the share of variance that factors share with each other is quantified by their squared correlation (Hair et al., 2010; Kline, 2005), we arrived at the same conclusion when applying the Fornell-Larcker (1981) criterion (e.g., Prochazka & Schweiger, 2019; Yale et al., 2015): AVEs for all factors was larger than the square of all factor correlations.

Discussion

Overall, Study II produced two main findings. First, the results confirmed and expanded the evidence from Study I and yielded robust support for the scale's ability to measure and differentiate between cognitive, affective, and conative PSP with validity and multidimensionality. Second, the results specifically highlight the need to further improve the reliability of conative PSP measures.

Study III

The primary goal of Study III was twofold: (a) confirm previous results regarding the validity and multidimensionality of the scale, and (b) probe how the conative PSP measures might be adapted to overcome the reliability issues identified in Study II. To this end, we discussed our measures with other scholars within the field and arrived at the conclusion that the limited reliability of the conative PSP items was based on two reasons.

First, the formulation of Item 8 ("I commented out loud on CHARACTER's behavior") did not unequivocally refer to users reacting to media characters and included the adverb "out loud." The adverb was likely too ambiguous, such that some people might have interpreted "out loud" to mean shouting, while others might have interpreted it to mean speaking aloud in a normal register. Thus, the item formulation might have led users to exclude certain situations in which they engaged in conative PSP (e.g., depending on the viewing environment, such as when watching content on a smartphone in public). With this in mind, we changed the item formulation to "CHARACTER's behavior caused me to comment out loud or to myself."

Second, since Item 9 initially specified "at him/her," ("CHARACTER's behavior led me to gesture at him/her"), the formulation may have led to an imbalance in reported gestures. That is, participants might have reported gestures directed *toward* the character (e.g., wagging a finger at the media character), but refrained from reporting gestures *not* directed toward the

character (e.g., shrugging one's shoulder or throwing one's hands up). Thus, to include all types of gestures, Item 9 was revised to "CHARACTER's behavior led me to gesture."

Methods

Study III was preregistered (<http://bit.ly/40wnRdf>) and ethically approved by the Institutional Review Board of the University of Fribourg (No. 2022-11-01).

Procedure and Sample

Study III was conducted in February 2023. A quantitative online survey was administered to a sample of 500 US participants recruited via the *prolific* platform using census-representative gender, age, and ethnicity quotas (US Census Bureau, 2024). Participants received a small monetary incentive (£1.95) for completing the survey. The dataset was cleaned based on the same time, data quality, and attention check criteria as in Studies I and II. Four participants were excluded due to failed attention checks, and two due to filling in the survey too quickly. Based on the quality self-assessment, no other participants were excluded. Replacements were recruited to reach 500 participants. Table S1 shows that the sample both matched the US population and resembled the samples employed in Studies I and II, including an underrepresentation of people older than 75 years and non-White people. Of the participants, 52% were female and 48% were male, and the mean participant age was 45.1 years ($SD = 15.6$, $MIN = 18$, $MAX = 86$). Regarding ethnicity, 77% of the participants identified as White, 12% as Black, 6% as Asian, 2% as having mixed ethnicities, and 2% as other ethnicities.

Measures

The same recall cues were employed as in Studies I and II and accounted for valence and engagement intensity. The participants were asked to recall a media character and a specific instance of media exposure. The 5-point Likert scale used in Studies I and II (1 = "do not agree at all"; 5 = "agree completely") was applied for all measures. We captured PSP using the nine

items applied in Study II but replaced the two of the conative items with the reformulations described above (see Table S6). The measurements used in Study II to assess other concepts related to media character and content processing were also adopted in Study III (see Table S4): PSR ($M = 3.0$, $SD = 1.3$, $\alpha = .97$), R-PSI ($M = 3.2$, $SD = 1.2$, $\alpha = .94$), PSI ($M = 1.5$, $SD = 1.0$, $\alpha = .97$), identification ($M = 3.3$, $SD = 1.0$, $\alpha = .92$), and transportation ($M = 3.5$, $SD = 0.7$, $\alpha = .73$).

Results

The data analysis sequence used in Study II was adopted for Study III (1) to confirm that the scale captures the three factors of cognitive, affective, and conative PSP, (2) to determine how reliably our items measure these factors, and to confirm the associations between (3) cognitive, affective, and conative PSP and (4) between these components and other measures of media users' processing of media characters and content.

Does Our Scale Capture the Theoretical Distinction Between Cognitive, Affective, and Conative PSP?

Using the same statistics for absolute (RMSEA, TLI, CFI, SRMR) and relative model fit (AIC, BIC, aBIC), we replicated Study II's CFA to examine the fit of five models: a three-factor model (M3) that tested the assumption that the scale empirically captures the theoretical distinction between cognitive, affective, and conative PSP; a one-factor model that assumed all items measured one single factor (M1), three alternative two-factor models that collapsed the cognitive and affective PSP items into a single factor (M2.1), collapsed the cognitive and conative PSP item into a single factor (M2.2), and collapsed the affective and conative PSP items into a single factor (M2.3); and a three-factor model (M3) that tested the assumption that the scale empirically captures the theoretical distinction between cognitive, affective, and conative PSP.

TABLE 6 ABOUT HERE

The results presented in Table 6 demonstrate that Study III successfully replicated the superiority of the three-factor model (M3). Since the AIC, BIC, and aBIC values were lower than the corresponding values for all one- and two-factor models, these results confirmed that the scale captures the theoretical distinction between cognitive, affective, and conative PSP. Importantly, according to the absolute fit indices RMSEA (.07), SRMR (.04), CFI (.98), and TLI (.97), the three-factor model achieved good absolute fit, which reinforced the scale's suitability and indicated that the adjustments made in response to the reliability issues encountered in Study II were effective.

FIGURE 2 ABOUT HERE

How Reliably Are Cognitive, Affective, and Conative PSP Measured?

The reliability analysis confirmed the effectiveness of the changes made to the conative items in Study III (Table 7). Cronbach's alpha, CR, AVE, and indicator reliability unequivocally supported good reliability for cognitive PSP, affective PSP, and conative PSP.

TABLE 7 ABOUT HERE

How Are Cognitive, Affective, and Conative PSP Associated with Each Other?

We investigated the associations between cognitive, affective, and conative PSP to examine whether the close match between theoretically derived patterns and the empirical factor correlations observed in Study III could be replicated. Both were confirmed. All factor correlations were less than .70 (Figure 2), and the factors again exhibited specific variance more than shared variance, thus replicating the finding that the scale facilitates a multidimensional account of PSP (Hair et al., 2010; Kline, 2005).⁸ Indeed, the correlations between cognitive PSP

⁸ The same conclusion emerged, again, when calculating the Fornell-Larcker (1981) criterion, and all AVEs were larger than the square of all factor correlations.

and both affective and conative PSP were stronger than the correlations between affective and conative PSP, which supports the scale's validity.

How Are Cognitive, Affective, and Conative PSP Associated with Other Measures of Users' Processing of Media Characters and Content?

The consistency between the results of Studies II and III extends from the associations between cognitive, affective, and cognitive PSP and their associations with other measures of users' processing of media characters and content (Table 8). These associations were profoundly varied and closely aligned with the most up-to-date theoretical perspectives, which is desirable for valid multidimensional measures: PSR and R-PSI were most strongly correlated with affective PSP, identification was strongly correlated with affective and cognitive PSP, transportation was strongly correlated with cognitive PSP, and PSI was more strongly associated with conative PSP than with affective and cognitive PSP. This pattern was even more pronounced in Study III than in Study II.

TABLE 8 ABOUT HERE

Discussion

Study III robustly confirmed the validity and reliability of the PSP Short Scale. The improvements made to the conative factor following Study II led to a significant improvement in the scale's reliability, especially regarding the conative factor. Thus, the PSP Short Scale validly and reliably assesses PSP as a multidimensional concept. With only nine items, the scale is also capable of capturing PSP efficiently and with breadth appropriate to a multidimensional concept that matches the theoretical description of the concept. Furthermore, it clearly highlights the expected relationships with other concepts that describe media users' processing of media characters and content.

General Discussion

PSP is an essential concept in research on parasocial experiences, consisting of cognitive, affective, and conative components, which it concerns media users' broad processing of mediated encounters (Klimmt et al., 2006; Schramm & Hartmann, 2008). Leveraging the relevant theoretical background and existing PSI Process Scales (Schramm & Hartmann, 2008), we derived a nine-item scale that reconciles the ideals of the theoretical breadth of PSP measurement with the need for applicability in empirical research. The scale development and validation, which involved three preregistered studies, each with samples of 500 participants, using census-representative gender, age, and ethnicity quotas based on US population data, satisfied the current methodological standards.

Since PSP's multidimensionality and three-factor structure were validated and developed through the three studies, the scale's usability was thoroughly established. Exploratory Factor Analysis distinguished between three emergent factors that matched the theoretically derived components of cognitive, affective, and conative PSP. The CFA conducted in Studies II and III confirmed the items' suitability for assessing PSP validly and reliably, both as a whole and individually (i.e., cognitive, affective, and conative PSP). These studies further refined and improved the reliability of the scale's final nine-item version. The discriminant validity of cognitive, affective, and conative PSP was also established to underline the scale's multidimensionality. Furthermore, nomological validity was confirmed by assessing the relationships between cognitive, affective, and conative PSP and other concepts of parasocial experiences that involve users' processing of media content. Because these relationships aligned significantly with the core theoretical premises of PSP research, they further underscored the scale's ability to measure the concept it is meant to measure from a theoretical perspective. Ultimately, the PSP Short Scale is a valid and reliable instrument for measuring PSP in empirical studies.

The relationships demonstrated between the three components of PSP and other established measurements contribute to the short scale's uniqueness and its ability to play a significant integrative role in media and communication research. The scale synthesizes and links the main foci of various types of parasocial experiences and media content processing to users' reactions to media characters during instances of media exposure. The longer-term concepts of PSR (Tukachinsky, 2011) and R-PSI (Rubin et al., 1985), which focus on affective relationships between media users and characters, were strongly correlated with affective PSP. Identification, which involves cognitive and affective processes, such as role-taking and merging with media characters (Cohen, 2001), was strongly correlated with both cognitive and affective PSP. Defined as media users' illusion of being in interaction with a media character (Hartmann & Goldhoorn, 2011b), PSI focuses on conative processing (i.e., reactions of media users and media characters) and therefore correlated primarily with conative PSP. Transportation, as it refers to media users' processing of media content (Green et al., 2004), was strongly correlated with cognitive PSP. Overall, these patterns confirmed the theoretically derived relationships between the PSP components and other concepts related to parasocial experiences or media users' content processing. These results accentuate the scale's ability to assess PSP as a broad and multidimensional concept and to exceed the theoretical breadth of existing measures of parasocial experiences.

The proposed PSP Short Scale adds to the existing literature by addressing the fact that, despite an apparent theoretical consensus that PSI, PSP, and PSR are not conceptually interchangeable (e.g., Dibble et al., 2016; Klimmt et al., 2006), related measurements tend to treat them as interchangeable. While PSI focuses narrowly on the media users' illusion of being in reciprocal interaction with a media character during an instance of media exposure, existing measurements labeled using the term "PSI," such as Rubin et al.'s (1985) PSI Scale, in fact measure broader aspects of media users' processing. When PSP, as operationalized in Schramm

and Hartmann's (2008) PSI Process Scales, is treated as a separate concept, these conceptual overlaps are avoided. Accordingly, the PSP Short Scale operationalizes PSP as media users' broad psychological processing of media characters during or directly after media exposure. In doing so, the proposed PSP Short Scale addresses recent calls for a validated measurement of this concept (e.g., Dibble et al., 2023) by offering researchers a validated measurement with the potential to support results comparisons in the future.

Consisting of just nine items, the scale can be administered easily and efficiently in empirical studies. First, it is less burdensome for respondents, which leads to higher completion rates and reduced respondent fatigue. Second, it requires fewer resources to conduct data collection and analysis, which is cost effective. Thus, it facilitates clearer insights and more actionable results in applied research. Fourth, the scale can be adapted for use with various research contexts, designs, and objectives while preserving its ability to assess dimensionality. This enhances study comparability and consistency in empirical studies. Finally, the short scale can be integrated with other measures and scales to support a comprehensive understanding of communication phenomena while maintaining study efficiency. We hope that future studies will adopt the PSP Short Scale to analyze media users' psychological processing of media characters from a broad perspective.

In addition to its many contributions, this study has some limitations. First, participants were instructed to recall a specific media character and media exposure situation. While this procedure was necessary because the scale would otherwise have been strongly skewed toward participants' favorite media characters, future research should also administer the scale directly after media exposure, for example, using experience sampling or experimental studies. Second, the participants were asked to think about a media character from a series or movie they had previously watched. It is not yet certain whether the scale is applicable to other types of media characters (e.g., influencers), other types of media (e.g., social media), or real media persona

(e.g., athletes, news presenters, or people featured in documentaries). Thus, an important direction for future methodological studies is to examine the scale's applicability to other media characters and other media.

The study's third limitation is that no causal relationships between the PSP components and other concepts, such as R-PSI, PSR, identification, or transportation, could be assessed using cross-sectional survey data. To achieve this objective, future research will need to collect longitudinal data. Finally, some of the questions raised by Schramm and Hartmann (2008) remain unanswered. The short scale was tested in English only, and translations will require additional testing and validation. A factor-analytical validation of the extensive full PSI Process Scales is still pending.

Conclusion

Using validated empirical and theoretically grounded measures is a necessary prerequisite for theoretical advancements in media and communication research on parasocial experiences. Only by applying established measurements across different studies, in research settings, and with various media character types will the findings be comparable and conclusions generalizable (Dibble et al., 2023). In pursuit of that goal, this study proposes the PSP Short Scale, a short multidimensional scale for measuring PSP developed and tested using EFA and CFA. The PSP Short Scale validly and reliably measures media users' cognitive, affective, and conative processing of media characters during media exposure, and its relevance to other established measurements of media users' processing of media characters and content highlights its usability.

Declaration of Interest Statement

The authors declare that there are no competing interests to report.

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Tables

Table 1

24-Item Pool for Measuring Parasocial Processing.

While watching, ...

- 1) I focused my attention on CHARACTER.
- 2) I watched closely what CHARACTER said or did.
- 3) I watched closely how CHARACTER behaved.
- 4) I tried to understand the acts of CHARACTER.
- 5) I intensely thought about CHARACTER's behavior.
- 6) I thoroughly thought about what CHARACTER did.
- 7) I often tried to guess what CHARACTER might say next.
- 8) I had ideas about how things would develop for CHARACTER.
- 9) I thought about what could happen to CHARACTER*

-
- 10) I thought about what connects me with and what distinguishes me from CHARACTER.
 - 11) I sometimes compared CHARACTER's thoughts to mine.
 - 12) I thought about if I would do things like CHARACTER or not.

-
- 13) I sometimes felt the same emotions as CHARACTER.
 - 14) I could feel the emotions CHARACTER showed.
 - 15) CHARACTER's feelings were contagious to my feelings.
 - 16) CHARACTER's feelings influenced my own mood.
 - 17) I felt compassion for CHARACTER.
 - 18) I felt empathy for CHARACTER.

-
- 19) I reacted to CHARACTER's behavior with my facial expression.
 - 20) CHARACTER's behavior triggered my facial expression.
 - 21) At certain moments, I said something to CHARACTER.
 - 22) I commented out loud on CHARACTER's behavior.
 - 23) I sometimes gestured towards CHARACTER.
 - 24) CHARACTER's behavior led me to gesture at him/her.

Note: The item pool is based on the PSI-Process scale (Hartmann & Schramm, 2008). Dashed lines signify the theoretical distinction between items aimed at cognitive PSP, comparisons between media user and character, affective PSP, and conative PSP explained in the main text.

Table 2*Exploratory Factor Analysis of Parasocial Processing*

	Factor loadings		
	1 cognitive	2 affective	3 conative
1) I focused my attention on CHARACTER.	.63	.20	-.03
2) I watched closely what CHARACTER said or did.	.76	.05	-.05
3) I watched closely how CHARACTER behaved.	.83	.00	-.02
4) I tried to understand the acts of CHARACTER.	.59	.31	-.16
5) I intensely thought about CHARACTER's behavior.	.65	.01	.19
6) I thoroughly thought about what CHARACTER did.	.79	.01	.04
7) I often tried to guess what CHARACTER might say next.	.26	.23	.31
8) I had ideas about how things would develop for CHARACTER	.58	.14	.05
9) I thought about what could happen to CHARACTER.	.77	.02	-.03
10) I thought about what connects me with and what distinguishes me from CHARACTER.	.32	.22	.26
11) I sometimes compared CHARACER's thoughts to mine.	.07	.60	.26
12) I thought about if I would do things like CHARACTER or not.	.29	.50	.02
13) I sometimes felt the same emotions as CHARACTER.	-.07	.83	.13
14) I could feel the emotions CHARACTER showed.	.15	.66	.09
15) CHARACTER's feelings were contagious to my feelings.	.01	.63	.26
16) CHARACTER's feelings influenced my own mood.	.14	.39	.34
17) I felt compassion for CHARACTER.	.05	.86	-.10
18) I felt empathy for CHARACTER.	.07	.84	-.11
19) I reacted to CHARACTER's behavior with my facial expression.	.44	-.08	.52
20) CHARACTER's behavior triggered my facial expression.	.44	-.12	.51
21) At certain moments, I said something to CHARACTER.	.01	.07	.74
22) I commented out loud on CHARACTER's behavior.	.20	-.11	.69
23) I sometimes gestured towards CHARACTER.	-.11	.15	.82
24) CHARACTER's behavior led me to gesture at him/her.	-.07	.09	.81
SS loadings	4.8	4.1	3.4
Proportion variance	.2	.2	.1

Note. Fully standardized loadings, primary loadings in bold. Principal axis analysis with oblimin rotation. Factor correlations: cognitive-affective $r=.38$, cognitive-conative $r=.57$, affective-conative $r=.36$. Dashed horizontal lines represent the theoretically derived distinctions between items aimed at cognitive PSP, comparisons between media users and character, affective PSP, and conative PSP.

Table 3*Absolute and Relative Fit of Five CFA Models (Study II)*

	Model				
	<i>M1</i>	<i>M2.1</i>	<i>M2.2</i>	<i>M2.3</i>	<i>M3</i>
<i>Factors</i>	1) cognitive- affective- conative	1) cognitive- affective 2) conative	1) cognitive- conative 2) affective	1) cognitive 2) affective- conative	1) cognitive 2) affective 3) conative
RMSEA	.20	.18	.13	.16	.09
CFI	.72	.79	.89	.84	.95
TLI	.63	.71	.85	.77	.93
SRMR	.11	.09	.10	.11	.05
AIC	13,710	13,577	13,380	13,489	13,271
BIC	13,786	13,657	13,460	13,570	13,359
aBIC	13,729	13,597	13,400	13,509	13,293

Note. The dashed line signifies the distinction between the statistics of relative model fit (AIC, BIC, and aBIC) and of absolute model fit (RMSEA, CFI, TLI, SRMR). The alternative CFA models are differentiated by the columns and explained within the main text. Full output for the one-factor model (M1) and the three two-factor models (M2.1-M2.3) is in SM Table S5.

Table 4*Reliability of Cognitive, Affective, and Conative PSP Measurement (Study II)*

	PSP components		
	<i>Cognitive</i>	<i>Affective</i>	<i>Conative</i>
Cronbach's Alpha	.83	.86	.69
AVE	.62	.68	.41
indicator reliability	.73	.79	.62
composite reliability	.83	.87	.67

Note. Composite reliability is conceptually related to Cronbach's alpha; indicator reliability is the lowest factor loading of the factor; AVE is the average variance extracted.

Table 5

Associations of Cognitive, Affective, and Conative PSP with Other Measures of Parasocial Experiences and Users' Processing of Media Content (Study II)

	PSR	R-PSI	Identification	Transportation	PSI
Cognitive PSP	.49	.55	.63	.67	.17
Affective PSP	.87	.87	.91	.52	.31
Conative PSP	.29	.32	.39	.43	.39

Note. All correlations were statistically significant, $p < .05$. Associations were obtained by associating the latent factors of cognitive, affective, and conative PSP with the correlates displayed in the columns.

Table 6*Absolute and Relative Fit of Five CFA Models (Study III)*

	Model				
	<i>M1</i>	<i>M2.1</i>	<i>M2.2</i>	<i>M2.3</i>	<i>M3</i>
<i>Factors</i>	1) cognitive- affective- conative	1) cognitive- affective 2) conative	1) cognitive- conative 2) affective	1) cognitive 2) affective- conative	1) cognitive 2) affective 3) conative
RMSEA	.23	.18	.13	.18	.07
CFI	.72	.82	.90	.83	.98
TLI	.63	.75	.89	.77	.97
SRMR	.12	.11	.07	.12	.04
AIC	13,488	13,248	13,039	13,214	12,863
BIC	13,564	13,328	13,119	13,294	12,951
aBIC	13,505	13,268	13,059	13,234	12,885

Note. The dashed line signifies the distinction between the statistics of relative model fit (AIC, BIC, and aBIC) and of absolute model fit (RMSEA, CFI, TLI, SRMR). The alternative CFA models are differentiated by the columns and explained within the main text. Full output for the one-factor model (M1) and the three two-factor models (M2.1-M2.3) is in SM Table S7.

Table 7*Reliability of Cognitive, Affective, and Conative PSP Measurement (Study III)*

	PSP component		
	<i>Cognitive</i>	<i>Affective</i>	<i>Conative</i>
Cronbach's Alpha	.85	.90	.78
AVE	.65	.76	.54
indicator reliability	.80	.85	.72
composite reliability	.85	.91	.78

Note. Composite reliability is conceptually related to Cronbach's alpha; indicator reliability is the lowest factor loading of the factor; AVE is the average variance extracted.

Table 8

Associations of Cognitive, Affective, and Conative PSP with Other Measures of Parasocial Experiences and Users' Processing of Media Content (Study III)

	PSR	R-PSI	Identification	Transportation	PSI
Cognitive PSP	.49	.56	.68	.68	.18
Affective PSP	.89	.88	.88	.41	.26
Conative PSP	.44	.46	.51	.49	.41

Note. All correlations were statistically significant, $p < .05$. Associations were obtained by associating the latent factors of cognitive, affective, and conative PSP with the correlates displayed in the columns.

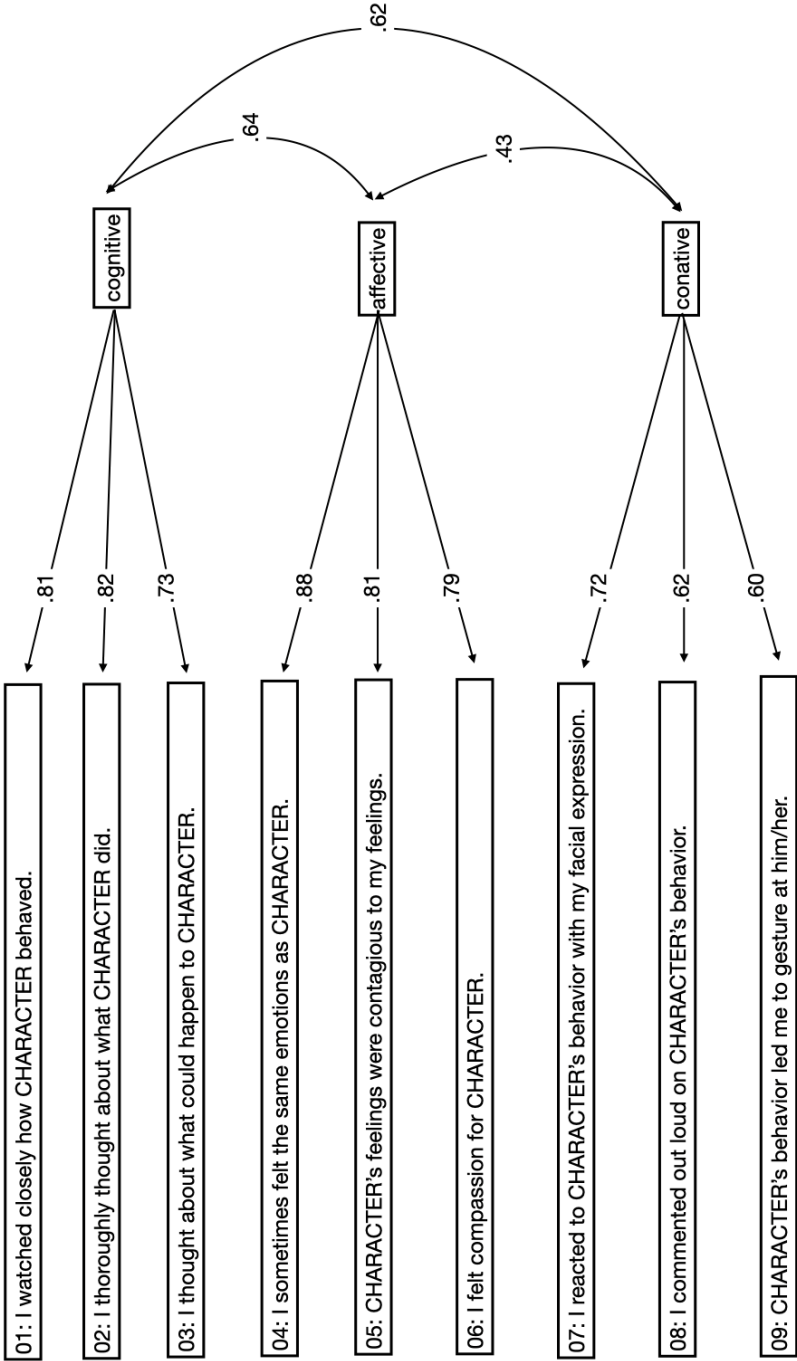


Figure 1: The standardized values of the Confirmatory Factor Analysis of the short scale (N=500) are displayed. Note. Fully standardized Maximum-Likelihood coefficients. Ellipses are latent factors, squares manifest indicator variables. One-sided arrows are factors loadings, two-sided arrows factor correlations. All factor loadings and correlations were statistically significant, $p < .05$. The three-factor model tests the assumption that our scale captures the theoretical distinction between cognitive, affective, and conative PSP.

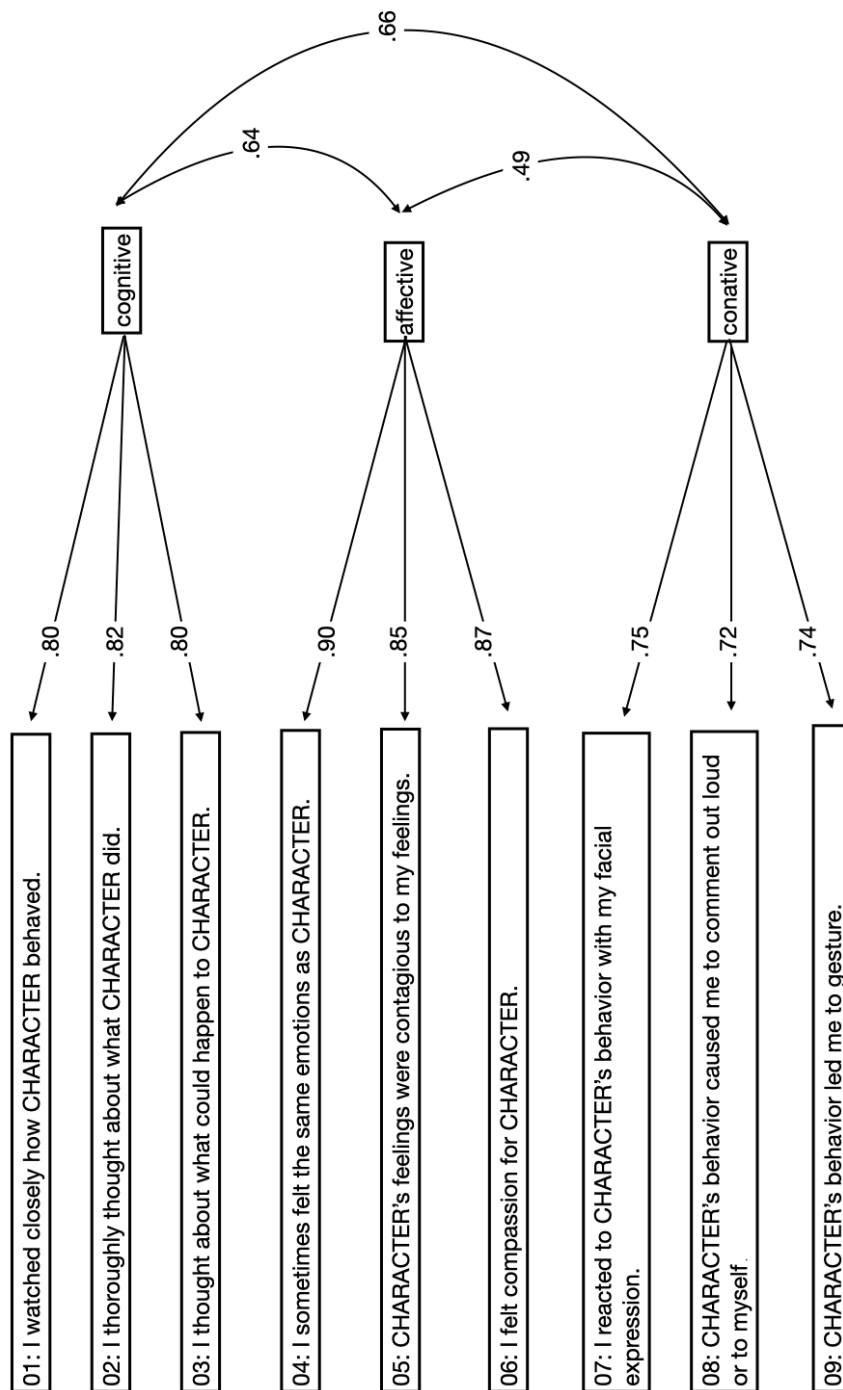


Figure 2: The standardized values of the Confirmatory Factor Analysis of the short scale (N=500) are displayed. Note. Fully standardized Maximum-Likelihood coefficients. Ellipses are latent factors, squares manifest indicator variables. One-sided arrows are factors loadings, two-sided arrows factor correlations. All factor loadings and correlations were statistically significant, $p < .05$. The three-factor model tests the assumption that our scale captures the theoretical distinction between cognitive, affective, and conative PSP.

5.4.1 Article IV: Supplementary Materials

Table S1

Descriptive Statistics of the Samples.

	<u>Study I</u>		<u>Study II</u>		<u>Study III</u>		<u>population</u>
gender	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	%
female	258	52%	258	52%	259	52%	51%
male	242	48%	242	48%	241	48%	49%
age							
18-24	53	11%	62	12%	58	12%	12%
25-34	95	19%	95	19%	94	19%	17%
35-44	96	19%	80	16%	96	19%	17%
45-54	81	16%	84	17%	83	17%	15%
55-64	97	20%	103	21%	107	22%	16%
65-74	57	12%	64	13%	50	10%	13%
75+	16	3%	10	2%	9	2%	9%
ethnicity							
white	384	77%	384	77%	384	77%	64%
asian	30	6%	30	6%	32	6%	6%
black	64	13%	64	13%	62	12%	12%
mixed	12	2%	12	2%	12	2%	11%
other	10	2%	10	2%	10	2%	8%

Note. The distribution in the samples closely represents the population. The elderly population (75+) is underrepresented in the sample, whereas 25-64-year-olds are slightly overrepresented. White people were overrepresented in all three samples, and mixed and other ethnicities underrepresented.

Table S2*Descriptives of the Individual Items for Assessing Parasocial Processing in Study I.*

	<i>Mean</i>	<i>SD</i>	<i>Skew</i>	<i>Kurtosis</i>
1) I focused my attention on CHARACTER.	3.7	1.2	-.7	-.4
2) I watched closely what CHARACTER said or did.	3.8	1.2	-.8	-.2
3) I watched closely how CHARACTER behaved.	3.7	1.2	-.7	-.3
4) I tried to understand the acts of CHARACTER.	3.7	1.3	-.7	-.6
5) I intensely thought about CHARACTER's behavior.	3.2	1.3	-.2	-1.0
6) I thoroughly thought about what CHARACTER did.	3.6	1.2	-.6	-.6
7) I often tried to guess what CHARACTER might say next.	2.9	1.3	.0	-1.2
8) I had ideas about how things would develop for CHARACTER	3.6	1.2	-.8	-.2
9) I thought about what could happen to CHARACTER.	3.8	1.2	-.9	-.2
10) I thought about what connects me with and what distinguishes me from CHARACTER.	2.8	1.4	.1	-1.3
11) I sometimes compared CHARACTER's thoughts to mine.	2.8	1.4	.1	-1.3
12) I thought about if I would do things like CHARACTER or not.	3.1	1.4	-.2	-1.3
13) I sometimes felt the same emotions as CHARACTER.	2.9	1.4	-.1	-1.3
14) I could feel the emotions CHARACTER showed.	3.3	1.3	.0	-.9
15) CHARACTER's feelings were contagious to my feelings.	2.8	1.4	.1	-1.3
16) CHARACTER's feelings influenced my own mood.	2.8	1.3	.1	-1.2
17) I felt compassion for CHARACTER.	3.4	1.5	-.5	-1.0
18) I felt empathy for CHARACTER.	3.4	1.4	-.5	-1.0
19) I reacted to CHARACTER's behavior with my facial expression.	3.5	1.3	-.5	-.8
20) CHARACTER's behavior triggered my facial expression.	3.4	1.3	-.5	-.9
21) At certain moments, I said something to CHARACTER.	2.2	1.4	.7	-.9
22) I commented out loud on CHARACTER's behavior.	2.9	1.5	.1	-1.5
23) I sometimes gestured towards CHARACTER.	2.3	1.4	.6	-1.0
24) CHARACTER's behavior led me to gesture at him/her.	2.3	1.4	-.6	-1.0

Note. The dashed lines signify the distinction between the three factors: cognitive, affective, and conative PSP.

Table S3*Descriptives of the Individual Items for Assessing Parasocial Processing in Study II.*

	<i>Mean</i>	<i>SD</i>	<i>Skew</i>	<i>Kurtosis</i>
1) I watched closely what CHARACTER said or did.	3.9	1.1	-1.0	.3
2) I thoroughly thought about what CHARACTER did.	3.7	1.2	-.7	-.3
3) I thought about what could happen to CHARACTER.	3.9	1.1	-1.1	.5
4) I sometimes felt the same emotions as CHARACTER.	3.1	1.4	-.3	-1.2
5) CHARACTER's feelings were contagious to my feelings.	2.9	1.4	.0	-1.3
6) I felt compassion for CHARACTER.	3.4	1.4	-.5	-1.1
7) I reacted to CHARACTER's behavior with my facial expression.	3.6	1.2	-.6	.5
8) I commented out loud on CHARACTER's behavior.	2.9	1.5	.0	-1.5
9) CHARACTER's behavior led me to gesture at him/her.	2.3	1.3	.6	-.9

Note. The dashed lines signify the distinction between the three factors: cognitive, affective, and conative PSP.

Table S4

Full Scales Used (Study II and III).

Transportation (Green & Brock, 2000)

While I was watching the show, I could easily picture the events in it taking place.

I could picture myself in the scene of the events described in the show.

I was mentally involved in the show while watching it.

After finishing the show, I found it easy to put it out of my mind. (R)

The show affected me emotionally.

I found myself thinking of ways the show could have turned out differently.

I found my mind wandering while watching the show. (R)

While watching the show, I had a vivid image of the characters.

Identification (Cohen, 2001)

While viewing the program, I felt as if I was part of the action.

While viewing the program, I forgot myself and was fully absorbed.

I was able to understand the events in the show in a manner similar to that in which CHARACTER understood them.

I think I have a good understanding of CHARACTER.

I tend to understand the reasons why CHARACTER does what he/she does.

While viewing I could feel the emotions CHARACTER portrayed.

During viewing, I felt I could really get inside CHARACTER's head.

At key moments, I felt I knew exactly what CHARACTER was going through.

While viewing, I wanted CHARACTER to succeed in achieving his/her goals.

When CHARACTER succeeded, I felt joy, but when he/she failed, I was sad.

Parasocial Relationships (Tukachinsky, 2011)

If CHARACTER was a real person, ...

... I could disclose a great deal of things about myself to CHARACTER.

... I could disclose positive things about myself honestly and fully to CHARACTER.

... I could disclose negative things about myself honestly and fully to CHARACTER.

... I would be able to count on CHARACTER in times of need.

... I would give CHARACTER emotional support.

... I could trust CHARACTER completely.

... CHARACTER would be able to count on me in times of need.

... I would will to share my possessions with CHARACTER.

... I could have a warm relationship with CHARACTER.

... I would promote the well-being of CHARACTER.

Sometimes, I wish I knew what CHARACTER would do in my situation.

Sometimes, I wish I could ask CHARACTER for advice.

I think CHARACTER could be a friend of mine.

Experience of Parasocial Interactions (Hartmann & Goldhoorn, 2011)

While watching the show, I had the feeling that CHARACTER

was aware of me.

knew I was there.

knew I was aware of him/her.

knew I paid attention to him/her.

knew that I reacted to him/her.

reacted to what I said or did.

R-PSI-Scale (Rubin & Perse, 1987)

CHARACTER makes me feel comfortable, as if I am with a friend.

I see CHARACTER as a natural, down-to-earth person.

I look forward to watching CHARACTER on the next episode.

If CHARACTER appears on another program, I would watch that program.

CHARACTER seems to understand the kinds of things I want to know.

If I saw a story about CHARACTER in a newspaper or online, I would read it.

I miss seeing CHARACTER when I do not watch episodes over a longer time.

I would like to meet CHARACTER in person.

I feel sorry for CHARACTER when he/she makes a mistake.

I find CHARACTER to be attractive.

Note. Responses were collected for all concepts with a 5-point Likert scale ranging from 1 = 'do not agree at all' to 5 = 'agree completely'.

Table S5

Comparison of 1-factor, 2-factor, and 3-factor models with CFA for the nine PSP items in Study II.

	1 factor model	2 factor model	2 factor model	2 factor model	3 factor model
	1 PSP	1 cognitive-affective 2 conative	1 cognitive-conative 2 affective	1 cognitive 2 affective-conative	1 cognitive 2 affective 3 conative
1) I focused my attention on CHARACTER.	.73	.69	.80	.81	.81
2) I watched closely what CHARACTER said or did.	.70	.65	.80	.81	.82
3) I watched closely how CHARACTER behaved.	.66	.63	.73	.73	.73
4) I tried to understand the acts of CHARACTER.	.74	.79	.88	.84	.88
5) I intensely thought about CHARACTER's behavior.	.74	.77	.81	.83	.81
6) I thoroughly thought about what CHARACTER did.	.69	.74	.79	.76	.79
7) I often tried to guess what CHARACTER might say next.	.52	.67	.57	.42	.72
8) I had ideas about how things would develop for CHARACTER	.34	.64	.39	.28	.62
9) I thought about what could happen to CHARACTER.	.40	.65	.39	.37	.60
model fit indices					
RMSEA	.20	.18	.13	.16	.09
SRMR	.11	.09	.08	.11	.05
CFI	.72	.79	.89	.84	.95
TLI	.63	.71	.85	.78	.93
AIC	13710	13577	13380	13489	13271
BIC	13786	13657	13460	13570	13359
aBIC	13729	13597	13400	13509	13293

Note. The dashed line signifies the distinction between the statistics of relative model fit (AIC, BIC, and aBIC) and of absolute model fit (RMSEA, CFI, TLI, SRMR).

The alternative CFA models are differentiated by the columns and explained within the main text.

Table S6*Descriptives of the Individual Items for Assessing Parasocial Processing in Study III.*

	<i>Mean</i>	<i>SD</i>	<i>Skew</i>	<i>Kurtosis</i>
1) I watched closely what CHARACTER said or did.	4.0	1.2	-1.1	0.4
2) I thoroughly thought about what CHARACTER did.	3.8	1.2	-0.9	-0.1
3) I thought about what could happen to CHARACTER.	3.8	1.2	-1.0	-0.1
4) I sometimes felt the same emotions as CHARACTER.	3.1	1.4	-0.3	-1.2
5) CHARACTER's feelings were contagious to my feelings.	2.9	1.4	-0.1	-1.3
6) I felt compassion for CHARACTER.	3.4	1.4	-0.4	-1.2
7) I reacted to CHARACTER's behavior with my facial expression.	3.6	1.2	-0.6	-0.5
8) CHARACTER's behavior caused me to comment out loud or to myself.	3.3	1.4	-0.3	-1.2
9) CHARACTER's behavior led me to gesture.	2.7	1.4	0.2	-1.3

Note. The dashed lines signify the distinction between the three factors: cognitive, affective, and conative PSP.

Table S7

Comparison of 1-factor, 2-factor, and 3-factor models with CFA for the nine PSP items in Study III.

	1 factor model	2 factor model		2 factor model		3 factor model		
	1 PSP	1 cognitive-affective	2 conative	1 cognitive-conative	2 affective	1 cognitive	2 affective-conative	3 conative
1) I focused my attention on CHARACTER.	.64	.59		.77		.81		.90
2) I watched closely what CHARACTER said or did.	.67	.62		.80		.81		.82
3) I watched closely how CHARACTER behaved.	.69	.65		.78		.80		.80
4) I tried to understand the acts of CHARACTER.	.82	.89			.90		.89	.90
5) I intensely thought about CHARACTER's behavior.	.82	.85			.85		.86	.85
6) I thoroughly thought about what CHARACTER did.	.79	.83			.87		.85	.89
7) I often tried to guess what CHARACTER might say next.	.54		.73	.63		.46		.75
8) I had ideas about how things would develop for CHARACTER	.41		.72	.52		.34		.72
9) I thought about what could happen to CHARACTER.	.53		.77	.57		.48		.74
model fit indices								
RMSEA	.23	.18		.13		.18		.07
SRMR	.12	.11		.07		.12		.04
CFI	.72	.82		.90		.83		.98
TLI	.63	.75		.89		.77		.97
AIC	13488	13248		13039		13214		12863
BIC	13564	13328		13119		13294		12951
aBIC	13507	13268		13059		13234		12885

Note. The dashed line signifies the distinction between the statistics of relative model fit (AIC, BIC, and aBIC) and of absolute model fit (RMSEA, CFI, TLI, SRMR). The alternative CFA models are differentiated by the columns and explained within the main text.

6 Overall Discussion

In this last chapter of the dissertation, the main findings are presented and discussed to categorize them into the context of the existing literature. To start with, in the first subchapter, the four articles presented in Chapter 5 are briefly summarized. Then, the contributions of this dissertation to the existing literature are presented (Chapter 6.2). Following that, the limitations of the presented studies are discussed, and based on that, an outlook on future research is given (Chapter 0). The last chapter of this dissertation then presents a brief conclusion (Chapter 6.4).

6.1 Summary of Findings

The first article of this dissertation examined possible situational drivers for PSPs and PSRs in response to the overarching research question: *Which situational factors influence PSPs and PSRs in people's everyday media use?* The goal of this study was to explore the factors that might differ between viewing situations as potential drivers of viewers' PSEs. Viewers' viewing motives, multitasking related and unrelated to watched content, and the extensiveness of viewing sessions were selected as situational factors. Using a multimethod design that combined usage tracking and experience sampling surveys, viewers' PSPs and PSRs were assessed in the context of everyday Netflix use. The findings, which demonstrated high external validity, showed that PSP intensity depends on viewers' motives for escapism and social interaction, whereas other potential viewing motives—habit, companionship, entertainment, and passing time—did not influence PSP intensity. Additionally, viewers' engagement in nonmedia multitasking, such as cooking or exercising while consuming media content, decreased viewer PSP. Multitasking on the same device used to watch Netflix or on a separate device did not influence viewer PSP; neither did content-related multitasking in the form of exchanges with physically or virtually present others. Viewers' PSRs were not influenced by any of the situational factors assessed in this study. Examining the situational perspective on these viewing motives, which may vary between viewing sessions, is an

innovative approach in this area. It becomes especially interesting, since the findings contradict existing research that frames these motives as general or aggregated and has identified the positive effect of viewers' motives for companionship, social interaction, escapism, and entertainment on PSEs (e.g., Ebersole & Woods, 2007; Kurtin et al., 2019; Liu et al., 2019; Spinda et al., 2009).

The second article explored the influence of viewer-perceived and actual sociodemographic and psychological similarities between viewers and media characters on viewer PSP. This article was guided by the following research question: *How do the actual and viewer-perceived similarities between media characters and audience members relate to the strength of PSP?* The selected similarity factors included sociodemographic features (i.e., age, gender, job, relationship, and living situation) and psychological traits (i.e., the Big Five, loneliness, and self-esteem), which were assessed through usage tracking, experience sampling surveys, and media character content analysis. Each time the participants closed Netflix, they were asked to indicate their PSP with a media character. These chosen media characters were supplemented with tracking data (i.e., watched series, season and episode number) so that the media characters' sociodemographic and psychological traits could be assessed using content analysis. To address the research question, actual similarity was determined by combining viewer self-assessment and coder assessments of the media character. The findings indicated that for extraversion and general psychological similarity, PSP increases with similarity for both, while for age and conscientiousness, PSPs decrease with similarity for both. None of the other assessed similarity types – actual similarities in gender, relationship, job, living situation, neuroticism, agreeableness, openness, loneliness, and self-esteem similarities as well as perceived similarities in demographics, loneliness, and self-esteem – were found to influence viewer PSP. These findings highlight the importance of differentiating between actual and viewer-perceived similarities when assessing the role of similarity in mediated encounters. Additionally, researchers need to clearly specify which

particular types of similarity—for example, sociodemographic or psychological—are in focus, instead of labelling similarity generically or as overall similarity.

The third article addressed the following research question: *How do PSRs, PSB distress, and the relationship between them differ for temporary, uncertain, and definite breakups?* The current media environment, in which streaming platforms often release entire seasons at once, has made uncertain breakups prevalent. Uncertain breakups describe the situation that viewers do not know if and when new content with the media character they maintain a PSR will be released. In two studies with a two-survey design, viewers of five shows were recruited (*Emily in Paris*, *Bridgerton*, *Peaky Blinders*, *Shadow and Bone*, and *Never Have I Ever*), and the three PSB types were explored. Study I employed independent samples, and Study II employed dependent samples. Additionally, beyond the affective effects of PSBs, Study II considered viewers' behavioral reactions to the three breakup types. The results show that PSRs positively predict viewers' temporary, uncertain, and definite breakup distress and subsequent PSRs after a breakup, aligning with existing research (e.g., Bond & Calvert, 2014; Ferchaud et al., 2022; Gregg, 2018; Hu, 2023). Viewers' loneliness did not influence PSBs or the relationship between PSRs and PSBs for any of the three types of breakup consistently in both studies, resulting in unclear general patterns. Expanding on the first findings of Lather and Moyer-Gusé (2011), the three types of breakup distress differed in terms of the associated behavioral effects, although the most preferred activity after all types of breakups was watching other series. During temporary breakups, viewers indicated engaging more in nonmedia activities, such as spending time with friends or family. Despite the feasibility of doing so on streaming platforms, viewers did not report dealing with uncertain breakups by rewatching old episodes in which the media character appeared.

The fourth article applied a methodological perspective on PSEs. Based on the experiences with the three first empirical studies that showed the lack of a validated and ecological measurement to assess viewers' PSEs in the broad sense of PSP, the need for a

short scale to assess viewers' PSEs became apparent. Therefore, the methodological article focused on the development of a short scale to measure viewers' PSP in response to the following research question: *How can PSP be measured reliably and validly by means of a short scale?* Based on the PSI-Process Scales and informed by theoretical principles, a selection of items was developed through three empirical studies. Using factor and discriminant and convergent validity analysis, the scale development process resulted in a nine-item short scale (PSP Short Scale) that measures cognitive, affective, and conative PSP with good validity. Both the theoretical background and original PSI-Process Scales assume that PSP consists of three components: cognitive, affective, and conative PSP (Hartmann et al., 2004; Klimmt et al., 2006; Schramm & Hartmann, 2008); however, prior to the present study, the presence of this assumption in the PSI Scales had not been assessed through factor analysis. The scale expands existing measurement options by assessing PSE during media exposure, defined as viewers' psychological processing (Dibble et al., 2023). Furthermore, the developed scale is ecologically applicable in different media settings and to various media characters, and it accurately accounts for the broad nature of PSP while distinguishing the concept clearly from PSIs and PSRs.

6.2 Contribution of the Research and Outlook on Future Studies

The articles that constitute this dissertation offer valuable insights into viewers' PSEs with media characters in the context of self-directed, everyday streaming media use. Specifically, the articles approach this new dynamic in PSEs with an appreciation of viewers' increased autonomy over media use. The first three articles are united by their use of viewers' PSEs as dependent variables. Each article explores different potential drivers of PSEs in self-directed viewing settings on streaming platforms. The contribution to the literature are manifold and include specific areas of parasocial research, such as the prevalence of multitasking or the role of similarity in present-day PSEs, which are discussed individually in

the articles directly. The fourth article, based on the experiences of applying existing measurements to the study of PSEs in self-directed viewing settings, resulted in the development of a validated short scale capable of ecologically assessing viewer PSP. This chapter discusses the articles' overall contributions to the literature, and provides an outlook on future studies that build on these content, theoretical, and practical contributions.

6.2.1 *Parasocial Experiences in People's Everyday Media Use*

The primary *content and methodological contribution* of this cumulative dissertation is the analysis of PSEs in the context of real-world everyday media use patterns. PSEs are a popular research topic, and the number of publications has increased in recent years, but few studies have analyzed PSEs in a way that reflects everyday media use (Schramm et al., 2022). Due to technological advancements and the prevalence of mobile devices, social media, and streaming platforms, media containing diverse media characters are omnipresent in most people's daily lives (Granow et al., 2018; Jenner, 2014). In general, PSEs have been shown to influence viewers' enjoyment (e.g., Schluetz et al., 2020; Tukachinsky & Stever, 2019), persuasive effects (e.g., Rosaen et al., 2019; Shen et al., 2017), transportation (Erickson et al., 2019), identification (Dibble et al., 2016), or prolonged exposure (e.g., Billard, 2019; Czichon, 2019). Thus, understanding how viewers process mediated encounters is crucial for understanding media use patterns and experiences.

With the application of an innovative methodological design, this dissertation significantly contributed to the analysis of PSEs in the context of everyday media use. The first two studies employed a field study design that combined usage tracking with surveys triggered by participants' media use. In the absence of viewing instructions, participants engaged in their usual viewing habits and consumed media content as they wished. Accordingly, the study design conferred high external validity to the results. Viewers' PSEs with media characters on streaming platforms were explored in a way that reflected everyday

media use and in a timely manner by surveying them directly after media use. In the third study, although viewers' PSEs were assessed only twice, and not after each viewing session, the study largely avoided manipulating viewers' media streaming habits. Together, the findings of these studies (Articles I and II) increase the external validity of the existing literature, which has so far imposed viewing instructions or experimental manipulations on media use, which undermines the degree to which previous findings reflect actual media engagement patterns.

The focus on self-directed, everyday viewing media use and viewer's PSEs within these settings contributes methodologically to the existing PSE research. In these autonomous settings, PSI with media characters on streaming platforms are rather scarce. In the prestudy conducted for the first article, the EPSI Scale was used within the context of everyday media use and self-directed streaming media consumption (see Chapter 3.2.1). The EPSI Scale defines and measures PSI, the viewer's feeling that the media character is aware of them, responds to them, and interacts with them (Hartmann & Goldhoorn, 2011). The descriptive statistics showed that viewer PSI in these settings was very low, which seems plausible since viewers can self-directedly consume media content. When parasocial research began in the 1960s, TV was a rather new development, and viewers responded to newscasters as they would to friends (Horton & Wohl, 1956). Now that viewers are familiar with the various media technologies that are prevalent in their everyday lives (Jenner, 2017; Nanda & Banerjee, 2020), it is plausible that they rarely report feeling addressed by media characters, especially those in the primarily fictional content on streaming platforms. In this setting with viewers engaging in self-directed media use on streaming platforms, there is no "interaction" between them taking place (Hartmann, 2023), thus, it makes more sense to study viewers' PSP than their PSI. Within this setting, viewers still encounter numerous diverse media characters, so understanding how they process these mediated encounters in the sense of PSP remains critical for understanding their entertainment, enjoyment, and duration of media use

(e.g., Anghelcev et al., 2021; Klimmt et al., 2006; Tukachinsky et al., 2020). Thus, analyzing viewers' broad psychological processing of such mediated encounters in the form of viewer PSP is highly relevant in these self-directed, everyday viewing settings.

Further research should build on these study designs to produce parasocial research that better reflects actual media use patterns, such as it was done in these studies with the tracking tool that enabled the analysis of viewers' real media use. First, viewers' PSEs should be analyzed over a long period of time to facilitate the assessment of PSP and PSR development in relation to daily media use. By recruiting viewers of a show for which a new season has been announced, general engagement can be tracked and enhanced with survey data. For the new episodes of the new season, they could always answer their PSEs with the same character (e.g., the protagonist) after each new episode. Subsequently, the development of their PSR strength, the PSP that occurs during each instance of media exposure, and the possible influence of PSP on PSR strength could be measured in a setting with a high external validity.

Should PSEs not be limited to a specific show, the development and interplay of PSP, PSRs, and PSBs with different media characters could be explored simultaneously. For example, during an uncertain or temporary PSB, viewers might satisfy their need for PSRs with other media characters and then return to the original media character when new material is released. By integrating more media content into the study design, it might be possible to assess whether and to what extent viewers supplement their PSEs with other forms of media engagement (e.g., following the actors on social media, watching behind-the-scenes videos on YouTube, or reading news reports about the show's viewing statistics). What influence might these alternative forms of engagement have on subsequent PSEs? Generally, it would be fruitful to consider whether the strength of PSR differs when viewers add new media characters to their extended mediated circle of friends, and how the interplay between these different PSRs with various media characters develops.

Another avenue toward building on the contributions of this dissertation is expanding the focus on streaming platforms to all of a viewer's mediated experiences. For example, participants might be asked to complete a diary during a specific time and document every mediated encounter they experience, whether these occur when reading newspapers, watching TV, listening to podcasts, or using social media. This approach would expand the scope of parasocial research to all kinds of media characters and provide preliminary insights into their individual experiences of parasocial encounters with various media characters. Another approach, which could be applied to any media format, might be to trigger experience sample surveys randomly throughout the day to capture data about participants' most recent mediated encounters. A study of this kind would facilitate an exploration of PSEs in the context of everyday media use without restricting the focus to one media format or streaming service due to available usage tracking applications, such as the one used in Articles I-III. These insights would be beneficial given the prevalence of mediated encounters in daily life and the need to better understand how people experience them and their possible effects.

6.2.2 *Parasocial Experiences in Self-directed Media Use*

The second *content contribution* of this dissertation is its consideration of viewers' autonomy in their media consumption nowadays. The technological advancements in the last years significantly changed audience members' possibilities to consume media content, for example, on streaming platforms (Jenner, 2020). In contrast, viewers' parasocial encounters with media characters in linear TV were limited through programming schedules and a much more limited media offer. This shift in autonomy to media users, and with that, their increase in power over their parasocial encounters, is considered in the first three articles of this dissertation. Thereby, the dissertation offers insights into viewers' PSEs within their self-directed use of streaming platforms that mirrors current media use patterns.

Changes in media technologies have strongly influenced people's media use habits through mobile media use and the rise of self-directed media consumption on streaming platforms (Jenner, 2017; Matrix, 2014). Some of these changes are also reflected in existing PSE research that has focused on experiences with influencers on social media platforms, such as Instagram, or streaming platforms, such as YouTube (e.g., Flecha-Ortiz et al., 2023; Lou & Kim, 2019; Tolbert & Drogos, 2019); however, only a few studies have analyzed viewers' PSEs with content consumed on streaming platforms. Despite the need to broaden the perspective and include diverse media outlets explained before, it is a strength that the dissertation focuses on streaming platforms, as they are an important and omnipresent source of PSEs within the current media consumption environment. As the use of streaming platforms becomes more prevalent, especially among adolescents (e.g., Duarte, 2023; Külling et al., 2022; Stoll, 2023), this topic becomes increasingly relevant. Thus, this dissertation took steps toward addressing a significant research gap by choosing to explore a context that reflects actual current media use habits.

The environment in which PSEs are analyzed is important because context influences viewers' accessibility of media content and characters, and autonomy in their PSEs. For example, viewers' PSEs with media characters that appear regularly in specific TV formats, such as talk shows or news reports, have been well explored (e.g., Rubin et al., 1985; Rubin & Step, 2000; Turner, 1993), but the more individual and self-directed media engagement made possible by recent technological advancements remains understudied (Jenner, 2017). On streaming platforms, viewers can decide the time, place, and duration of media consumption; accordingly, they can also engage with preferred media characters whenever and as long as they desire. It is therefore critical to consider these circumstances when studying the PSEs that occur within settings that clearly differ from those analyzed by parasocial studies conducted in the 1990s and the first two decades of the 2000s. Therefore, this dissertation contributes to the literature by demonstrating the value inherent in expanding the focus of

PSE research to account for the changing circumstances surrounding the consumption of media content and characters.

Future studies might expand on these findings by further expanding the context of viewers' PSEs as they occur during everyday media use beyond the streaming platform environment. A more holistic approach would therefore include viewers' PSEs in the context of all possible media formats, from books to audiovisual streaming platforms and social media. An individual might, for example, watch a new video series on a streaming platform and develop a PSR with a character, then subsequently join the series' fan page on Reddit, engage with making-of-the-series videos on YouTube, and follow series cast members on social media. Engaging in these activities might influence related PSBs. For example, regarding temporary PSBs, the viewer might obtain information about a new set or view snippets of new scenes on social media, or they might read about the actors and the plot or production of the new season in the news or on fan pages. Considering these types of engagement would add nuance to analyses of viewers' PSEs with characters in this show, especially if assessed in the long term.

Another means of building on these findings is to explore the characteristics of media characters prevalent in daily media use within the current media environment. This dissertation took an initial step by analyzing similarities between viewers and media characters in the second article; however, future research might go further by analyzing how media characters and their characteristics play a role in viewers' PSEs. Before attempting this, it might be worthwhile to take a step back and assess the diversity of the various media characters prevalent on streaming platforms according to sociodemographic characteristics, psychological traits, or their role in the plot (e.g., protagonist, sidekick, or antagonist). This might be achieved by conducting content analysis in a selection of contents available on a certain streaming platform. It would be important to include not only popular series to cover the content but also media characters that are possibly diverse. The next step could be to

connect the characteristics of these media characters to viewers' PSEs. Additionally, the characteristics of the media content within which they appear could be considered. For example, the genre or the degree of reality of media content could be respected within viewers' PSEs with these media characters.

6.2.3 *Parasocial Processing of Media Characters*

The third major *theoretical contribution* of this dissertation is the treatment of PSP as a concept distinct from PSI and PSR. With that, the dissertation also contributes to the theoretical development of parasocial research. In early parasocial research, these concepts and terms were not clearly distinguished and were sometimes used interchangeably (Dibble et al., 2016; Liebers & Schramm, 2019). Since then, media and communication research has established clear definitions of PSI and PSR (Dibble et al., 2023; Liebers & Schramm, 2023). In an attempt to introduce consistency with these definitions, scholars developed measurements to support empirical studies of these concepts, including the EPSI Scale, which assesses PSI (defined as viewers' illusion of being in an interaction with a media character; Hartmann & Goldhoorn, 2011), and the PSR Scale, which assesses viewers' long-term affective connections with media characters (Tukachinsky, 2011). Despite these developments, Rubin et al.'s (1985) erroneously named PSI Scale is still used frequently to assess viewers' PSRs. Another established measure, the PSI-Process Scales (Schramm & Hartmann, 2008b), defines PSI as PSP. The advantage of this scale—and the concept of PSP in general—is that it encompasses the psychological processing that accompanies viewers' mediated encounters more broadly and holistically than the narrowly focused PSI (illusional interaction) and PSR (feeling of relationship). Thus, contrary to what some early measurement scales suggest, PSP should be treated as a separate concept distinct from PSI and PSR.

Defining PSP in the broad sense of viewers' psychological processing—cognitive, affective, and conative—of media characters allows mediated encounters to be analyzed more

holistically (Schramm & Hartmann, 2008). To avoid producing unclear measurements and creating conceptual overlaps, future studies ought to distinguish PSP from PSI and clearly indicate which conceptualization of viewers' instant processing of a mediated encounter has been adopted by the authors. Currently, when reviewing an article that discusses PSI as a theoretical underpinning, the reader must check the study methodology carefully to determine whether the authors define PSI as a narrow concept limited to viewers' illusion of being in an interaction with the media character (PSI; Hartmann, 2008; Hartmann & Goldhoorn, 2011) or as viewers' broad psychological involvement with the media character (PSP; Schramm & Hartmann, 2008b). Failure to distinguish clearly between the concepts has resulted in findings being categorized according to various definitions of "PSI," including Rubin et al.'s conceptualization (Rubin et al., 1985; Rubin & Perse, 1987), which is now more commonly described as PSR (Dibble et al., 2016), or Horton and Wohl's original concept of being in interaction with a media character (Hartmann, 2008; Hartmann & Goldhoorn, 2011). Confusion of this kind tends to occur most often in interdisciplinary studies or outside the field of media and communication research (Schramm et al., 2022). In other scenarios, researchers discuss PSI in the sense of PSP (Schramm & Hartmann, 2008). This dissertation's focus on PSP as a separate concept, distinct from PSI and PSR, contributes to the theoretical development of PSE research. Thus, future research on PSEs would benefit greatly from clearer distinctions between PSI, PSR, and PSP.

Including PSP as a multidimensional concept that broadly covers the processing of a mediated encounter done in Articles I and II contributes positively to the research on PSEs. PSI and PSP focus on the processing that occurs during and directly after viewers' media exposure. PSP expands the narrow perspective of PSI and analyzes psychological processing holistically by accounting for cognitive, affective, and conative responses (Schramm & Hartmann, 2008). The breadth of the concept is one of the strengths of PSP in general. By developing the PSP Short Scale in Article IV, this dissertation contributes to the existing

literature by providing a validated and ecologically applicable means of assessing viewers' PSP, which has important implications for further establishing a clear conceptualization of PSP, primarily because it simplifies PSP assessment. Furthermore, the manageable number of items and validated item selection support a straightforward comparison of future findings obtained through the use of this scale. Therefore, the PSP Short Scale is an essential basic requirement for establishing the concept of PSP in the parasocial literature from a theoretical and empirical perspective.

The establishment of PSP as a separate concept and the validation of the PSP three-factor structure make additional theoretical contributions by adding a multidimensional perspective to parasocial research. In Article IV, PSP was proven to comprise viewers' cognitive, affective, and conative responses to mediated encounters with media characters. Existing studies of PSR have focused specifically on viewers' affective processing of media characters, while studies of PSI have focused specifically on the conative processing of media characters (Dibble et al., 2016). In future research, studies of factors that affect or influence PSP could be differentiated according to cognitive, affective, and conative PSP. For example, certain characteristics of viewers or media characters may play a significant role in cognitive PSP, while having no influence on conative PSP.

Additionally, depending on the study context, for example, the intention of a public service announcement, specific subtypes of PSP may be more relevant than others. In terms of correcting past inconsistencies, conflicting results of earlier studies might be reanalyzed according to the multidimensional perspective on the PSP of a mediated encounter to explore whether such inconsistencies might be explained by the unique influences of the three PSP subtypes. Because the concept's definition has been ambiguous, previous studies might have inadvertently focused on only one of the PSP subtypes, resulting in different findings about the same relationship. Thus, it is recommended that future PSE studies differentiate clearly between cognitive, affective, and conative PSP to add nuance to these PSP analyses.

Furthermore, in future research when only one instance of media exposure is in focus, PSP might be important to consider. When in these situations, the general psychological processing of audience members is important, PSP should be chosen as concept of PSE that is analyzed. For example, when audience members are exposed once to an advertisement video, it might be worth to consider viewer PSP, as their overall psychological processing of the mediated encounter is of interest. If they are only exposed once, their PSRs are irrelevant if they only encounter the media character once, and do not have pre-existing PSRs with the media character, as it could be the case with celebrities. And PSP opens the narrow perspective of PSI that only encompasses their illusion of being in an interaction, which, depending on the advertisement, might not be the core of the message. Thus, especially in research of media effects with media characters that are presented to an audience only for one instance of media exposure, viewer PSP should be considered. Existing studies analyzing the role of PSIs and PSRs can be expanded by considering PSP in these settings of, for example, persuasive effects (e.g., Rosaen et al., 2019; Shen et al., 2017), transportation (Erickson et al., 2019), prolonged exposure (e.g., Billard, 2019; Czichon, 2019), enjoyment e.g., Schluetz et al., 2020; Tukachinsky & Stever, 2019), stereotypes or stigmatization (Wong et al., 2017; Wu et al., 2018), or well-being (e.g., Hartmann et al., 2016; Hoffner & Bond, 2022).

Future studies might confirm the validation of the PSP short scale by administering it in diverse settings to assess its suitability for use with various media characters (e.g., liked vs. disliked and fictional vs. nonfictional), in different media environments (e.g., print, social media, and TV), and in different study designs (e.g., experimental, field studies, and cross-sectional surveys). An additional avenue for future research is to analyze post-media exposure PSP using a much broader lens than has been applied in existing research, which often assesses short-term PSI or long-term PSRs (Schramm et al., 2022). Using the confirmed three-factor structure, future studies might also better distinguish between analyzed concepts' effects on viewers' cognitive, affective, or conative PSP by, for example, reexamining

previously published but inconsistent findings and exploring whether specific effects were relevant solely to cognitive, affective, or conative PSP but not overall PSP.

6.2.4 *Conceptual Framework of Parasocial Experiences*

Another *theoretical contribution* of this dissertation is the conceptual framework for PSEs, PSIs, PSRs, PSBs, and PSP that was modelled to better connect and differentiate between these parasocial concepts, in the theoretical part of the dissertation. This framework builds on the previous theoretical contribution of establishing PSP as a separate concept from PSIs and PSRs that is worth analyzing. In the conceptual framework, the different concepts that encompass all of media users' PSEs are respected (Tukachinsky Forster, 2023a). This conceptual framework also provides a good basis for future research in this area and identifies research gaps. Future research should elaborate this conceptual framework and explore the suitability of this model – which differentiates PSEs, PSIs, PSRs, PSBs, and PSP – for further parasocial research. For example, more characteristics that potentially influence audience members' PSEs should be explored and integrated into the model. This could be done on the different levels of this model, for example, the media exposure, the media content, the media character, or the audience members. These characteristics could be, for instance, derived from research in interpersonal interactions or relationships, or they could result from changes in the media environment. Another important evolution of the model would be the inclusion of the relationships between the different concepts that describe PSEs with media characters. For example, the influence of PSIs on PSP or on the long-term on PSRs with the same media characters. Or the influence of PSP during immediate media exposure on the experience of PSBs that result at the end of the same media exposure setting. As these relationships between the PSE concepts were not analyzed in this dissertation, they were not included in the model, despite their theoretical importance.

The conceptual framework provides an overview over existing PSE concepts, such as PSIs, PSRs, PSBs, and PSP. Thereby, different factors relevant in this context are displayed. First, the media character or personality, who's characteristics might differ and potentially influence PSEs. Second, the audience members who have specific personality traits or stable characteristics such as media use habits that generally influence their PSEs. Third, the concrete media exposure situation that is characterized through factors such as the presence of other people or the place where media exposure happens. Fourth, characteristics of the media content in which the media character is embedded. Fifth, the media environment in which the media exposure take place. For all of these layers in the model, specific characteristics and their potential influence should be included in the model's further evaluation.

Another important extension of the conceptual model would be the embedding of the model into the context, with relevant outcome variables. For example, within the applications of PSEs in economics, health communication, political sciences, and so on. This next step is needed to derive practical implications of PSE research. For example, how do PSIs with a spokesperson in a public service announcement influence viewers to change their behavior accordingly, and what role to PSP or PSR with the same media character or play in this relationship? Parts of this application are already examined in existing literature, however, there is a lack of connecting all these findings for the different PSE concepts together meaningfully so that general assumptions and implications for practitioners can be drawn.

6.2.5 Deciding which Type of Parasocial Experiences to Analyze

To summarize the differentiation between PSE concepts (Chapter 2) and the developed PSP Short Scale for future research (Article IV), I propose a decision tree that aims to help researchers to decide which types of PSEs should be analyzed depending on the research focus and the setting of the mediated encounter of interest. The visualization helps choosing the matching concept of PSE to the research goal. The goal of this visualization is to simplify the

selection of the matching measurement without consideration of the broad amount of available parasocial literature which is respected in this process.

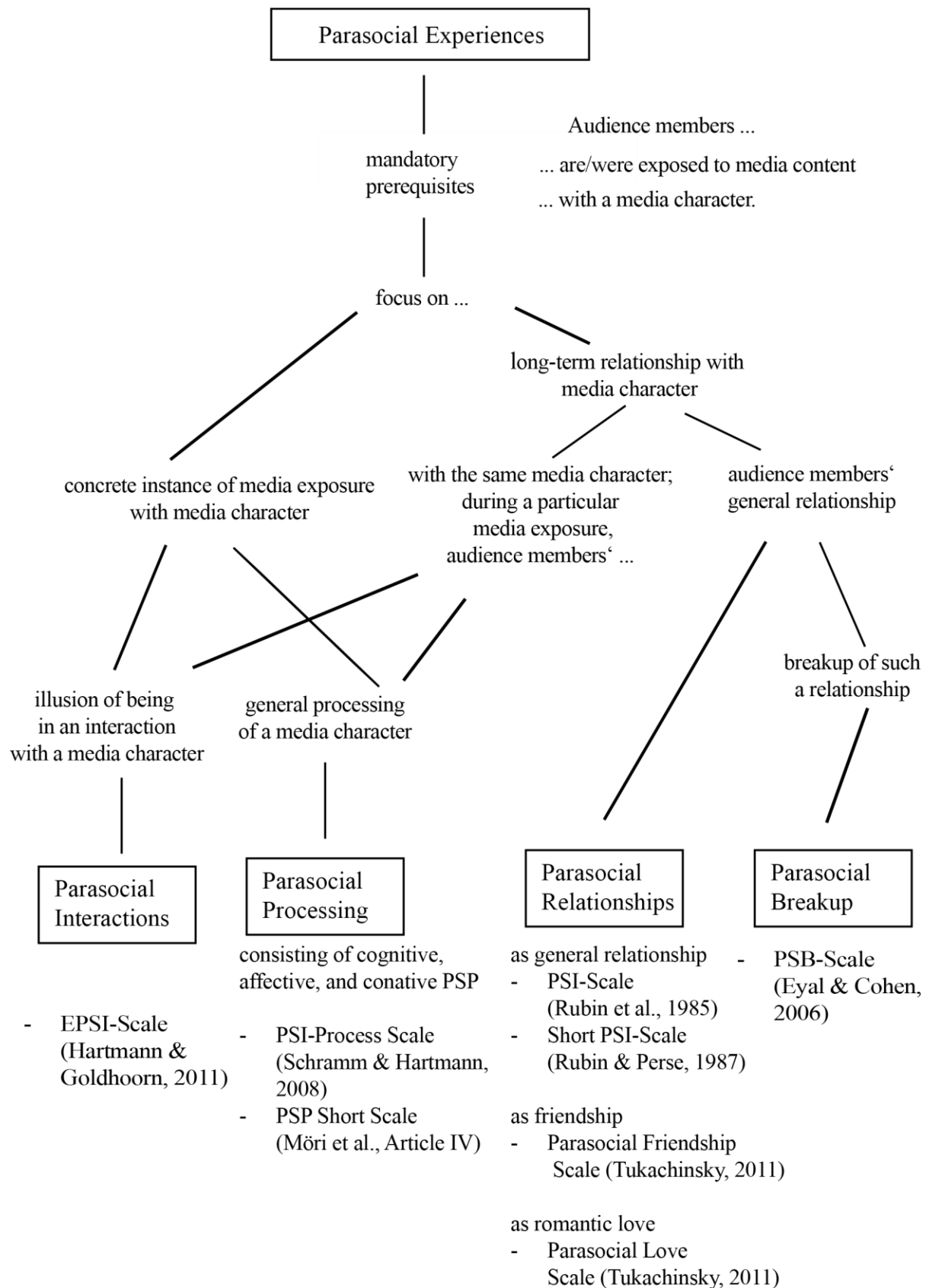


Figure 7: Proposed decision tree for choosing the suitable PSE concept and measurement (own visualization).

First, certain prerequisites need to be met for PSEs to take place. When these prerequisites are met, the question is whether it focuses on concrete instance(s) of media exposure or on general involvement of audience members with media characters. Depending on that, the concepts of PSI, PSP, or PSR match the research goal. Even when the general relationship with a media character is of interest, it might still be worth to consider audience members' PSI and PSP during a particular media exposure. For example, audience members' are watching an episode of *Friends*, and their PSRs with their favorite media character assessed. Additionally, it might be worth to assess their PSIs and PSP during media exposure with the same media character that their strength of PSR is assessed.

Besides the decision for the PSE concept to assess, their possible measurements are presented.⁹ Thereby, it also depends on which focus is taken within the concepts, for example, if audience members' general PSP is of interest, or only their affective PSP. For some of the PSE concepts, several scales exist that have slightly different focuses. For example, PSRs can be defined as general relationship between audience members and media characters. Some researchers distinguish, following the manifold possible social relationships, between different types of PSRs such as romantic love and general friendship (Tukachinsky, 2011). Depending on the chosen focus, the matching measurement can be chosen.

Overall, the proposed decision tree wraps up the definitions and differentiations of Chapter 2, and offers guidance for PSE researchers uncertain which of the concepts matches their research goals, and how to assess it in an empirical study with a validated measurement. By integrating the newly developed PSP Short Scale into existing parasocial research and by providing a visualization summarizing the theoretical definitions and differentiations, the

⁹ It is important to note that only a selection of existing PSE measurement scales are included in the visualization, based on their fit to the PSE concept, the validation process, and their popularity in PSE research. For a more extensive overview of these scales, see Dibble et al., 2023.

visualization could add to the further research in PSE. Future PSE research should respect the derived definitions for PSE concepts, and use validated and established measurement for their assessment in empirical studies. Resulting from that, findings will be comparable, and thus, results can better be generalized and compared. This would be an important endeavor for future PSE research.

6.3 Limitations and How to Overcome Them in Future Research

The dissertation has several limitations, most of which have been discussed in the individual articles presented in Chapter 3. Some of these limitations are relevant to the dissertation overall and are thus taken up here. These general limitations are described and discussed below, followed by suggestions for avoiding or overcoming similar limitations in future research.

6.3.1 Parasocial Experiences on Streaming Platforms

One content limitation of this dissertation is the restriction of PSEs to media characters on streaming platforms. Of course, based on technological advancements and the current media environment, self-directed media consumption is highly relevant (Jenner, 2014). Nevertheless, other forms of self-directed media use, such as other video streaming platforms (e.g., YouTube) and social media, also merit study. Although these types of PSEs are often analyzed (Schramm et al., 2022), they must also be evaluated in the context of self-directed media use. The limitation of streaming platforms was introduced by the tracking application used in the first two studies. At the time of data collection, BWDAT worked only with Netflix (Cordeiro et al., 2021). As Netflix is the most used streaming platform in Switzerland, this restriction is bearable. Still, due to the narrow focus on Netflix as the streaming platform of interest, the results are generalizable only to a limited extent and must be interpreted with this limitation in mind.

The browser extension introduced a second limitation, namely, the requirement that only participants who habitually used their computer to watch Netflix could be recruited. Because BWDAT only worked on laptops during the study period, potential participants who indicated that they used Netflix primarily on other devices were excluded. Although those participants who reported accessing Netflix primarily on their laptops had the ability to use their smartphones or smart TVs to access the streaming platform, these media use sessions were not included. For this reason, specific media use sessions that might have provided valuable data might have been excluded. One such possibility is that individuals might engage in coviewing more often than the first article suggests. Multiple viewers typically require larger screens and may access Netflix via smart TV applications rather than their laptops. Similarly, viewers who access Netflix primarily on their laptops might be sufficiently captivated by content that they continue watching on their smartphones during their commutes. These kinds of viewing sessions, which would likely be considered intense, would not have been covered in the first two studies. Thus, these limitations must be kept in mind when interpreting the dissertation's findings.

Field studies only focusing on peoples' media use on one particular platform, as done in Studies I-III, limit the generalizability of these findings. Future studies could adopt the field study approach to explore viewers' PSEs in the context of daily media use. To overcome these limitations, data might be collected in slightly different ways. For example, experience sampling surveys could be triggered at random times throughout the day to collect data on recent media use and related encounters with media characters. These data could be used to measure PSI, PSP, PSR, or PSB in relation to these media characters to analyze viewers' daily PSEs, independent of a particular media format or platform.

Future studies might also adopt the methodological approach of data donations to overcome device-specific software limitations, for example, by asking participants to open and complete a survey of a media character and their PSEs with this media character

following each Netflix session. These data could be supplemented through data donations of Netflix use that are later connected to individual survey data. These data donations describe peoples' consensual sharing of personal data—in this case their tracked data on Netflix through Netflix itself—for research purposes (Skatova & Goulding, 2019). Ultimately, all participants' Netflix use data will be represented. Media use journals might also be used to allow participants to create brief entries about their media use, character encounters, and experiences of these mediated encounters after each media exposure, regardless of the format or platform.

6.3.2 *Operationalization of Parasocial Processing*

Another overall theoretical limitation of this dissertation is that the first two articles subsume PSP under PSI, as defined by Schramm and Hartmann (2008). Thus, despite what the article titles suggest, rather than analyzing PSI, they analyzed PSP. Analyzing audience members' broad psychological involvement (PSP) labeled as analysis of PSI is one way that many researchers deal with definitions in parasocial research. For example, Schramm and colleagues (2022) categorize all research that uses the PSI-Process Scales as "PSI research"; however, this practice is counterintuitive for those who adhere to the definition of PSI established by Horton and Wohl (1956). There are two ways to deal with these conceptual difficulties and overlaps in use of terms. The first two articles take the first approach and treat PSI as a broad concept that encompasses the psychological processes that take place during a mediated encounter. The second approach is to distinguish PSP as a concept separate from PSI. As researchers in parasocial research are rather reluctant to introduce another new term into the plethora of existing parasocial concepts, adopting the second approach is rather challenging, but it would be the ideal way to combine the use of established definitions and analyze viewers' broad involvement with media characters, as covered by PSP.

Hand in hand with this theoretical approach is the methodological limitation concerning the operationalization of PSP in these studies. In both articles, several items from the PSI-Process Scales were selected to assess the participants' PSP levels. In both cases, a short selection of items was chosen according to their fit with the study context. In the experience sampling studies, it was important that the scale was not too long because participants were asked to complete the surveys several times over two weeks. Thus, the full scale with 112 items was not applicable in terms of letting people answer all these items after each media use, but shortening the scale to six items probably undermined its ability to assess PSP holistically. This issue was the impetus for the development of the PSP short scale presented in Article IV. Because the short scale development did not begin until after data was collected for the first two studies, their findings are limited by the lack of a short and validated means of measuring PSP. Additionally, the results of these studies are more difficult to contextualize within other research findings. Finally, it is possible that the item selection does not fully capture viewers' cognitive, affective, and conative PSP, or that it focuses more strongly on one of these three components than the selections used in other studies that also select individually the items to apply from the item pool of the PSI Process scale (e.g., Bond & Calvert, 2014; Schramm & Wirth, 2010).

Future parasocial research should endeavor to employ validated and established measurements for integrating a solid theoretical background, and with that, developing deeper content knowledge about PSEs. The first step in choosing an appropriate instrument is to clearly define the parasocial phenomena of interest. After choosing and describing the focal concept based on a solid theoretical background, the second step is to choose an appropriate empirical measurement and assess its suitability (see Figure 7). It is important that the established scales are developed thoroughly and validated for use in different settings (i.e., with different media characters or media outlets). The PSP short scale proposed in the fourth article requires further validation studies. The factor structure was tested in different studies

and could be replicated using the same study design. The applicability of the scale also requires additional studies. In experimental studies of audiovisual stimuli, the scale could be applied directly after participants' media exposure; likewise, the scale could be tested in an experimental setting that manipulates the media format (e.g., reading a text, watching a video, or listening to audio). A variety of additional studies are required to further refine and validate the short scale's use in PSP measurement.

6.3.3 *Various Different Media Characters*

Although the field study approach used in Articles I and II conferred high external validity to the results, the methodology also had several drawbacks. The first is that the lack of restrictions on what media content the participants watched resulted in a variety of different media characters in the final sample. During the analysis, the different media characters could not be analyzed specifically due to the small number of sessions for which the same media character was selected (see supplemental analysis, Article I). This limitation was somewhat mediated by the second article's consideration of the role that the characteristics of media characters played in PSEs, as assessed through an analysis of viewer-character similarity.

Still, many factors that were unique to each instance of media exposure were not considered in specific articles or in the overall dissertation. Although the observational approach resulted in high external validity, the fact that the studies did not assess the possible influence of numerous unidentified third variables, such as content genre and language or participant location and attentiveness, might be considered a limitation. In another study with the same methodological design, we showed that, while classifying content by genre (drama vs. comedy) did not influence viewers' transportation, arousal, or hedonic entertainment, it increased their eudaimonic entertainment (Wirz et al., 2022). It is possible that these and similar aspects of individual media exposure also influence viewers' PSEs in some way.

Accordingly, future studies should consider a variety of characteristics applicable to individual instances of media exposure when analyzing PSEs in the context of everyday media use to advance this line of research and broaden its content scope. The first article showed that situational aspects are especially important in PSP; thus, they should be considered in relation to participants' immediate processing of mediated encounters. The characteristics explored in the first article could be included as potential moderators of the influence of other concepts on people's PSEs. For example, situational characteristics, such as multitasking or the genres of the watched content, could be assessed in terms of their significance for PSEs based on the specific personality traits of viewers. Additionally, other situational characteristics could be explored to expand the findings of Article I, which suggested some potential situational drivers of PSP. Doing so would add to the existing literature by providing more insights into the impact of situational characteristics on PSEs, especially PSP.

6.3.4 *Short-Term Media Effects*

With the focus on PSP, a concept that is anchored in the concrete media exposure situation, the dissertation also methodologically limits the analysis to mostly short-term media effects. Despite the repeated measurements over a particular time in the three empirical articles, viewers' PSEs were only assessed directly after media use. Especially for PSR, however, the focus on possible long-term effects could be beneficial for the further theoretical development of the concept. Audience members' processing of media characters embedded in their daily lives could additionally be explored. These analyses could cover, for example, audience members' follow-up communication about the media characters with friends the next day. Or when they find themselves in a particular situation and think about how the media character behaved in a similar situation. Or when audience members generally think about the media characters during their day, be it triggered through a catchphrase, a specific behavior of

coworkers, or anything else that triggers their thoughts about the media character. All these described situations cover audience members' processing of a media character that goes beyond the immediate media exposure situation that could be analyzed additionally, especially to shed light on the theoretical perspective of the long-term development of PSR but also methodologically, to cover the more holistically processing of mediated encounters not only embedded directly within their media use.

Within this more long-term perspective, also cumulated media effects (e.g., Koch & Arendt, 2017) of PSEs could be analyzed. For example, in the context of PSEs, it could be worthwhile to include if audience members repeatedly consume the same content with the same media character, e.g., when they rewatch their favorite episodes of a television show. The effects—especially on the long term—could be considered as cumulated media effects and their analysis would add to the existing parasocial literature mainly characterized through short-term effects analyses (Liebers & Schramm, 2023). Following the theoretical PSR development model (Tukachinsky & Stever, 2019), such research could also examine the development and different stages empirically. For example, by following the development of PSR strength between audience members and media characters over a longer time, this repeated exposure should be considered. Assuming that a viewer regularly watches old episodes of the favorite show to bridge the time until a new season is released. It would be interesting to see whether PSP and PSR peak after the release of new episodes, or whether re-watching old episodes through the repeated consumption or through other processes (i.e., nostalgia, familiarity) increase their PSEs.

Future research, thus, should include long-term research perspectives in parasocial research to build on this limitation methodologically and for the further theoretical development. A possible research design, for instance, could be that individuals indicate a media character they currently encounter frequently in their daily media diet. Then, experience sampling surveys are triggered at random time points at a day. In these surveys, they would be

asked when the last time was that they thought about the media character, and they need to give more context about the situation. Through this approach, their processing and interactions with these media characters would be covered also independent from their concrete media use. With additionally asking about their media use – tracking it or through data donations – these data could be combined to cover their PSEs holistically.

6.3.5 Dropout Rates and Statistical Power

Another methodological limitation of this dissertation is the result of the cost of data collection. After applying the data cleansing criteria, the final samples resulted in insufficient power to compute more complex models. In the two studies based on a field study and tracking data, a significant amount of data was lost due to participants not completing the surveys on time, not completing them at all, or lacking interest in the encountered media characters. Data cleansing was necessary to produce a high-quality dataset; however, the process resulted in final samples that were smaller than estimates based on initial power calculations (for example, Chapter 5.1.1). Although estimating some of the hypothesized models was possible, more complex models that could have explored further the relationships between, for example, viewing motives and PSEs could not be calculated. Multilevel data would have facilitated an analysis of the interaction between media exposure factors and participant factors or made it feasible to distinguish the variance between media exposure sessions for the same participant and the variances between different participants (i.e., between vs. within effects). This possible shift to more personalized media effects analyses could yield a more nuanced into these analyses (see, for example, person-specific media effects paradigm: Valkenburg et al., 2021).

Future empirical research should increase the sample size to attain the power required to employ more complex models, analyze possible interaction effects, and distinguish between and within effects. In multilevel data sets, such as media exposure sessions nested

within participants, the sample size can be increased in two ways. First, the data collection period could be expanded, which requires motivating participants to complete surveys thoroughly before and after media use throughout the entire data collection period. One challenge is that participants may tire of answering the same questions and choose the option “I did not engage with any media character,” and subsequently, did not had to fill in their further responses, which occurred in the first two studies. Thus, it is important to carefully balance survey length, the general effort for the participants, and participant motivation so that expanding the data collection period results in high-quality data.

The second option is to increase the number of participants so that, as more participants track their media use and complete the surveys within the data collection period, the total number of cases available for inclusion in the analysis increases. Even with more participants, if within effects are of any interest, it is critical for each participant to provide data on at least three media use sessions to estimate the effects. Finally, although the extension is capable of supporting a large number of participants, providing technical support during the extension installation and the start of the data collection period is necessary to avoid the introduction of biases in the recruited samples resulting from technological issues (for example, based on gender or technological knowledge; Gil-López et al., 2023).

However, not only through increasing the sample size more complex analyses are possible. It is also worth noting that through the technological advancements, also new analysis methods emerged that are worth considering. One of these methods that could shed light on these relationships is the person-specific media effects paradigm, for example, conducted through the $N = 1$ method of analysis (Valkenburg et al., 2021). Also, within the multi-level models, further research strategies could be useful. For example, not only analyzing linear relationships between the independent and dependent variables, could enhance interesting findings. For example, linear growth models could be compared to other models such as unconditional growth or quadratic models (Warren, 2020)

Another approach to statistical analysis that is sometimes used in communication and media research is the Bayesian statistics (Keysers et al., 2020; Wagenmakers et al., 2018). One major advantage of the Bayesian approach is that old information from theories or existing empirical research can be combined with new data. Through that, in-depth testing of particular aspects of research models is possible (Morey & Rouder, 2011). Especially based on the vast empirical literature that is available about PSEs (Liebers & Schramm, 2017; Schramm et al., 2022), this approach could be beneficial in parasocial research. When integrating knowledge of previous studies in the same or a similar domain of PSE research, future PSE studies could better build on existing empirical knowledge. Through that, the development of PSE research could be better anchored within the relevant literature, and advance the broad knowledge about PSEs. Thus, the use of such approaches in future PSE studies is desirable to solidly build future studies on existing parasocial theories and knowledge from previous empirical studies.

6.3.6 *Focus on the Process and not the Outcomes*

In this dissertation, a lot of the performed research addresses research gaps resulting from the existing parasocial research. However, empirical research should answer research questions that go beyond the argument that there is no academic evidence for such phenomena or relationships. For the future of PSE research aligning with the findings of this dissertation, PSE concepts should be included in general media research—for example, as possible mediator or moderator—of other concepts. The shift in the analysis should move from the mere analysis of PSP in people's everyday media use to the relevance of PSEs and especially PSP in the context of media research or specific areas of media research such as entertainment (Klimmt et al., 2006; Rosaen & Dibble, 2017), prolonged media exposure (Erickson et al., 2019; Tukachinsky & Eyal, 2018), persuasion in health communication (Brown & Basil, 2010; Hoffner & Cohen, 2023), in marketing (Jin & Ryu, 2020; Sokolova & Kefi, 2020), or in the political context (J. Cohen & Holbert, 2021; Kelly et al., 2020). The analysis of the role of PSP

in current research areas such as the role of audience members' PSP in the context of media use and well-being (Granow et al., 2018; Hoffner & Bond, 2022), media use and addictive symptoms (de Berail et al., 2019; Tefertiller & Maxwell, 2022), or media users' perception of fake news or disinformation campaigns (Domenico et al., 2021; Nielsen & Graves, 2017) should be explored in future research. Embedding PSE research in general – and the analysis of PSP as audience members' broad psychological processing of media characters specifically – in broader communication and media research areas will be necessary to show the relevance of these concepts when analyzing questions of great societal importance.

As one example, in the context of entertainment research, the consideration of PSP as a separate concept could be worthwhile. For example, the role of PSEs in audience members' hedonic and eudaimonic entertainment could be examined (Oliver & Raney, 2011; Wirth et al., 2012). Can PSEs increase audience members' entertainment, and if so, which types of PSEs influence hedonic or eudaimonic entertainment experiences? Which types of media characters are well suited to increase audience members' entertainment? Also, the role of self-control and media use for entertainment (Eden et al., 2018; Reinecke & Meier, 2021) could be supplemented by including audience members' PSEs. For example, are PSEs one reason that decreases individuals' self-control when consuming entertainment media content? What possible implications for media users could be derived based on the relationship between self-control and PSEs in the entertainment context? Thereby, it would be important to consider manifold effects of PSEs, and not only focusing on either positive or negative effects.

PSEs are only one of the possible forms of involvement that audience members experience during media exposure. For example, Brown (2015) describes four types of involvements with media characters: transportation, PSI, identification, and worship. Of them, only PSI was covered in the articles of this dissertation. Especially in terms of identification, audience members' perspectives taken with a media character (J. Cohen, 2001), could add to these analyses of parasocial experiences. The relationship between transportation–audience

members' processing of the story or plot (Green et al., 2004)—and parasocial processing—audience members' processing of the media character—could be explored further. For example, to derive implications for practitioners on how to increase audience members' processing of media characters and content.

Connecting the analysis of PSEs with entertainment or media research in general and concepts such as transportation, entertainment, self-control, could result in derived hands-on implications for practitioners on how to create media characters and how to use well-suited media characters for entertainment or persuasion purposes, or for media use that is beneficial or recreational for users. For example, characteristics of media characters could be explored that increase audience members' PSEs with them, which in turn, increases their enjoyment, hedonic or eudaimonic entertainment, their well-being, or their recreation through media use. Based on such characteristics, producers could create media characters who enhance audience members' positive outcomes of media use.

On the other hand, also implications for media users could be derived when embedding the analysis of PSEs into their whole media exposure context. For example, future research should address how audience members' can manage their PSEs in ways that is beneficial to their well-being or entertainment, for example. By finding characteristics of the media characters, the media content, or the media environment that enhance such beneficial PSEs, this kind of PSE research could derive implications for audience members for their PSEs with media characters in their everyday media use.

Overall, such implications for practice addressed to media producers on one hand, and audience members on the other hand, would be an important benefit of future parasocial research that opens the focus to possible effects of PSEs instead of solely focusing on the concepts themselves.

6.4 *Concluding Remarks*

The studies contained in this dissertation have demonstrated that viewers experience PSEs with various media characters in their self-directed, everyday media use on streaming platforms, whereby especially their PSP is relevant and can be influenced through situational factors varying in each viewing situation. Moreover, this dissertation has shed new light on the role that similarity plays in PSI and PSP, showing that actual and viewer-perceived similarity influence them differently. Importantly, this dissertation expands the study of PSBs by introducing a new subtype that accounts for modern production and release practices. Finally, to address the many methodological challenges encountered during the early stages of research and overcome the problem of concept ambiguity within the discipline, the dissertation proposes a PSP short scale that facilitates a more nuanced and precise measurement of this multidimensional concept. Based on these cumulated research experiences, further propositions were proposed such as the decision tree. The cumulative dissertation contributes to the literature by shedding important light on the PSEs that occur in everyday life, demonstrating the efficacy of innovative multimethod designs, adding nuance to the role that character diversity and similarity play in PSEs, reflecting the realities of self-directed media use on streaming platforms, and developing and validating the PSP Short Scale.

The cumulative dissertation contributes to the literature mainly through the following points. First, the dissertation addressed a research gap by focusing on people's PSEs in their everyday lives. Through the innovative multimethod designs applied in the first two studies, PSEs in viewers' everyday use of streaming platforms could be covered.

Second, with the focus on media characters on streaming platforms, viewers' PSEs could be analyzed in a more self-directed media environment than in the often-analyzed relationships between audience members and news presenters or media characters present in linear TV. This shift in autonomy from program stations to the viewers themselves results in more power for the viewers over their media use and, with that, over their PSEs.

Third, through the observational approach and no viewing restrictions for the participants, the full diversity of available media characters could be included in the analyses. Nowadays, many diverse media characters are available to viewers to interact with parasocially on streaming platforms. Respecting this diversity in the study of PSEs is also essential and a contribution of this dissertation.

Fourth, the contribution of a validated short scale to assess parasocial processing enables an ecological measurement of PSP through a validated selection of items. The PSP short scale is a good complement to other established scales in PSE research. The PSP Short Scale's broad perspective covers audience members' processing more broadly and can give additional insights into the understanding of their processing of media characters. Additionally, when the scale is applied in subsequent empirical studies, the validated selection of items can enhance the comparability of future findings about PSP, for example, in meta-analyses.

Fifth, the application of multimethod designs in the first two studies contributes to the existing parasocial literature. The combination of tracking data, experience sampling surveys, and content analysis is an innovative approach to analyze parasocial experiences. The study designs enable new perspectives on PSEs, and for future research, new possibilities to analyze them.

Sixth, all articles of the dissertation were pre-registered before data collection. The material used in the studies and the resulting data are openly available on OSF, following the call for applying more open science practices in communication science (Dienlin et al., 2021).

Overall, the dissertation focused on audience members' parasocial experiences with media characters on streaming platforms. The three studies showed that within their everyday media use, audience members' encounter diverse media characters and experience PSP with diverse and dissimilar media characters. In these everyday media use settings of streaming platforms, PSP was to some extent dependent on situational characteristics such as audience members' multitasking or the extensiveness of the media exposure session. At the same time,

audience members' PSRs were stable throughout these viewing sessions and did not depend on situational factors. However, when such PSRs ended, audience members experienced emotional PSB distress, resulting in different behaviors depending on the type of their PSB.

Finally, the dissertation advances the theoretical development of PSEs by considering PSP as distinct concept that focuses on audience members' broad psychological processing of media characters. The three studies showed that this type of parasocial processing is prevalent in audience members' everyday media use on streaming platforms. By differentiating PSP from PSI and PSR, and introducing a new type of PSB, the dissertation should add to the further theoretical advancement of PSE research. The development of the PSP Short Scale also helps to implement this theoretical advancement in empirical studies, and hopefully, to the comparability of findings in the future.

7 References

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