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Research Article

Exploring Everyday Media Use: Viewing Motives, Multitasking, and Viewing Duration as Potential Drivers of Parasocial Interactions and Relationships

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Parasocial interactions (PSIs) and relationships (PSRs) are prevalent in media use. They are influenced by media characters, viewers, the viewing situation, and combinations thereof. While characteristics of media characters and viewers have been studied extensively, little is known about the impact of situational factors tied to viewing sessions in viewers' everyday media use. Situational factors potentially vary in each viewing situation. Especially for PSIs, a reception phenomenon bound to a specific viewing situation, these factors should be highly relevant. This preregistered study analyzed situational viewing motives, content-related and unrelated multitasking, and different forms of viewing session extensiveness (duration, number of episodes watched, and watching intensity) as potential situational drivers for PSIs and PSRs. The study applies an innovative multimethod design combining usage tracking of 95 participants and experience sampling surveys ($N = 693$) triggered before and after each viewing session. Through this new approach to analyzing PSIs/PSRs within everyday viewing sessions, influences on PSIs and PSRs were covered close to viewers' everyday media use, resulting in high external validity. The results show that PSIs depend on viewers' motives for social interaction and escapism, engagement in nonmedia multitasking, and self-assessed viewing intensity. None of the analyzed situational factors influenced viewers' PSRs.

Keywords: experience sampling; multitasking; parasocial interactions; parasocial relationships; usage tracking; viewing motives

1. Introduction

Understanding how viewers react to media characters is essential in analyzing their engagement with media content. Parasocial experiences (PSEs)—the one-sided social encounters of media users with media characters ranging from news presenters and celebrities to fictional movie characters—are crucial for enjoyment (e.g., [1]), persuasive effects (e.g., [2]), prolonged exposure (e.g., [3]), and many other media effects. Within the plethora of research on PSEs (for an overview, see [4, 5]), two main concepts have emerged that were often used interchangeably: *parasocial relationships* (PSRs) and *parasocial interactions* (PSIs). PSRs are enduring bonds audience members develop with characters beyond the viewing situation, similar to social friendships [6]. PSIs are limited to media exposure [7] and are often defined as the viewers' illusion of being in a conversation with a media character [8]. PSI can however also be defined more broadly as "parasocial processing" ([9], p. 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" ([9], p. 388) and more generally focuses on audience members' processing of media characters during media exposure [1].

Especially in early research on PSIs and PSRs, unclear use of terms, conceptual overlaps, and confusing naming of measurements led to unclear boundaries between the two concepts [1, 7, 10]. Later on, definitions and matching

measurements were developed, improving the conceptual clarity (e.g., [8, 9]). In line with this progress, PSEs has been introduced as an umbrella term to "connote the psychological aspects of all parasocial phenomena" ([11], p. 2). Originally used to describe the experience of PSI [8], the term offers a good solution to describe parasocial phenomena not limited to a specific parasocial concept [11, 12]. Using the term PSE is helpful when reporting earlier studies that do not clearly distinguish between PSIs and PSRs or have misused one term to describe the other, or when referring to parasocial phenomena more broadly.

Research analyzing PSEs usually considers characteristics of the viewers, such as attachment style and loneliness, or the media characters, such as physical attraction and credibility as predictors of PSIs and PSRs [4]. However, taking only one of these perspectives is not a holistic approach to explaining PSEs. Some characteristics are neither located purely on the character nor the viewer level. For example, PSE studies analyzing empathy depend on viewer characteristics and character traits (e.g., [13–15]). Further, *situational factors*, which subsume characteristics that can potentially vary in each viewing situation, may also influence PSEs. These factors are understudied in research on PSEs [5]. Therefore, we use an innovative multimethod design combining usage tracking and experience sampling surveys to investigate the research question:

> *How do situational factors influence PSI and PSRs in people's everyday media use?*

1.1. Situational Factors of Viewing Situations. Situational factors of viewing sessions include a variety of aspects related to the viewers' context, behavior, and psychological state during media use. These factors are often not considered in PSE research, likely due to difficulties in measuring them reliably without altering the situation. As a first step to explore situational influences on PSEs, this study explores a nonexhaustive selection of situational factors. Thereby, we focus on factors that (1) have a theoretical link to PSE and (2) are prevalent in everyday media use. First, *viewing motives* were shown to be relevant in PSE research but have been considered stable viewer traits even though they potentially vary in each viewing situation, so that their situational analysis seems worthwhile. Second, PSE research is rooted in the uprising of television [16]. Technological advancements in recent years have changed the way viewers consume TV content [17] or, more generally, how they interact with technology or algorithmically curated media content [18, 19]. For example, through streaming platforms, viewers have more autonomy over when, what, and for how long they want to consume media content [20]. Consequently, viewing habits changed, for example, resulting in a high prevalence of media *multitasking* [21] and *binge-watching* [22]. These new media environments [19] and viewing behaviors may affect attention to and therefore interactions with media characters. Therefore, we consider the influence of (1) situational viewing motives, (2) multitasking, and (3) the extensiveness of a viewing session in terms of duration, number of episodes, and watching intensity in PSEs.

In the following, we derive hypotheses for the potential influence of these three situational factors on PSEs. The hypotheses focus on both PSIs and PSRs. As previous research has often insufficiently differentiated between these concepts, it is difficult to postulate differential effects. Thus, we formulated the same hypotheses for PSIs/PSRs, while knowing that both concepts differ. Most importantly, in this context, PSI is strongly connected to media exposure [9], while PSR develops beyond [1]. We assume that situational factors have a stronger effect on the immediate experience, thus on PSI, because PSI is a reception phenomenon occurring *during* media exposure. However, since PSRs evolve from repeated PSI with the same media character [7, 23], we expect a spillover effect on PSR, although PSRs are probably impacted to a lesser extent.

1.2. Media Use Motives. In each viewing situation, viewers can have specific motives for using 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 [24]. In his discussion of viewing motives, Rubin [25] already stressed the importance of considering situational and social environment conditions. For example, the same viewer might have a strong need for companionship when consuming media in the morning. However, 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. Nevertheless, existing studies predominantly analyzed viewers' *general* motives for using a specific media platform with media characters [26, 27] or generally to encounter their favorite media character [28, 29]. These studies treated viewing motives as trait variables and did not analyze viewing motives potentially varying in each viewing situation, which needs to be kept in mind when interpreting their findings.

Viewers engaging in media use for *companionship* have the situational need for mediated encounters [30]. This motive may increase PSEs by focusing strongly on characters (e.g., [31]). *Social interaction* describes the motivation to watch media to have something to discuss with others [25]. In several studies considering this motivation as a trait, social interaction was associated with stronger PSEs [32, 33]. Engaging in media to *escape* or for *entertainment* was found to increase PSEs, while the more passive motives of *passing time* and *habit* were unrelated to stronger PSEs [27, 32]. It might seem counterintuitive to analyze habit as a situational motive. However, 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 analyzing viewing motives as traits or general viewing motives to engage with favorite media characters, we derived hypotheses for the influence of motives as situational factors. Thereby, we assume that the direction of the influence is the same as found in

previous research, but we will find these effects on a situational level:

> *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.*

1.3. 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* [34]. *Content-unrelated* multitasking comprises the simultaneous use of media and nonmedia tasks, two different media, or two tasks on a single medium [21]. The influence of content-unrelated multitasking—especially the use of a second device—was shown to decrease transportation (e.g., [35, 36]) and enjoyment (e.g., [35, 37]).

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 [21]. Both concepts rely on the social component of media consumption, with individuals exchanging about the content either in the same physical or virtual space [34] Viewers' engagement in *multitasking* is an influential driver for other types of psychological processing of media content. Studies linking content-related and unrelated multitasking to PSEs are rare, so the hypotheses are derived from research on other forms of media content processing. Viewers multitasking unrelated to the media content decreased viewers' transportation (e.g., [35, 36]) and enjoyment (e.g., [35, 37]), whereas content-related multitasking increased viewers' transportation and enjoyment (e.g., [37, 38]). Based on these findings, it seems plausible that distractions from the media content in the form of content-unrelated multitasking reduce the interaction with media characters. Therefore, 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).*

1.4. Extensive and Intense Viewing Sessions. The extensiveness of a viewing session in terms of duration and number of episodes potentially differs in each media use situation and is a potential driver of viewers' PSEs. In this sense, the extensiveness of a viewing session is often analyzed under the term "binge-watching" (see, for an overview, [22]). Generally, it is assumed that extensive viewing sessions should result in a strong immersion, and with that, PSEs should be favored [39]. Extensive viewing sessions—described by the time spent watching or the number of episodes watched—were shown to increase PSEs [40, 41]. Generally, the time viewers spend with characters positively influences PSEs (e.g., [27, 31]). In different contexts, it was shown that the frequency or time spent watching media content, such as on YouTube [42] or streaming platforms [43], 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., [3, 40, 41, 43–49]). From these studies, it can be assumed that extensive viewing sessions intensify PSEs. The longer viewers consume media content, the more opportunities they have to engage with media characters, and the more intense they may experience PSEs.

Due to criticism of the definitions of binge-watching (e.g., [50]), characteristics that describe different forms of the extensiveness of viewing sessions are analyzed separately to control for differential effects of these aspects of extensiveness; these are the *number of watched episodes* (derived from definitions of binge-watching; e.g., [20, 51]), the *duration* of a session (to address criticism regarding the binge-watching definition, see [52, 53]), and the self-assessed watching intensity (to address individual factors, see [43]).

> *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).*

1.5. PSIs and PSRs in Viewers' Everyday Media Use. Field studies documenting PSEs in people's everyday media use are rare [11]; however, they are necessary to assess situational drivers of PSEs. PSEs have often been examined in experimental studies [54–56], creating artificial viewing situations and often holding situational characteristics constant. Survey studies investigating PSEs [28, 57, 58] commonly have a considerable time lag between media use and measurement; memory changes or biases and generalizations make it difficult to analyze a viewing situation's concrete 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. Therefore, the question should be asked directly within the viewing episode to assess situational viewing motives in people's everyday media use.

The influence of situational factors on other psychological media effects, such as enjoyment and transportation, has been shown (e.g., [35, 37]). The potential influence of situational factors on PSEs remains a research gap, probably resulting from methodological difficulties in analyzing them, as these situational factors potentially vary in each media use situation and have to be measured in situ. However, viewers' PSRs and PSIs result from the interplay between media characters, viewers, and viewing situations. Technological advancements in media research facilitate the investigation of situational factors. 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 everyday media use situation. This approach ensures a high external validity. 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 immediate outcomes of media use such as PSEs. To overcome these limitations, we conducted an observational field study with usage tracking and experience sampling surveys directly before and after each viewing session. The design enables the analysis of situational drivers for PSEs within people's everyday media use.

2. Materials and Methods

2.1. Research Design and Procedure. A field study conducted in January and February 2023 tracked participants' use of Netflix for 2 weeks with individual starting dates. The usage data were complemented with surveys directly before and after each viewing session. Netflix was chosen because it is the most used subscription-based video streaming platform for TV series and movies in Switzerland [59, 60]. 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 a 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 BWDAT, an extension to the web browser Google Chrome that can track their use of Netflix and trigger surveys at specific times (see, for more information, [61]). After installing the browser extension, participants automatically received the surveys, and their use of Netflix was tracked (e.g., what they watched with title, season, episode, for how long, and when). After the successful installation of the BWDAT extension, a survey assessing sociodemographics and personality traits automatically opened in the browser window, and with that, the individual's 2-week data collection period started. For 2 weeks, whenever the participants opened or closed Netflix,[1] a short survey appeared. Before each viewing session, they were asked about their viewing motives. After each session, they reported on multitasking and their perceived viewing intensity. They named a character from the content watched in the session, and their PSIs and PSRs were assessed. Thereby, they were completely free in choosing a media character so that they could name nonfictional characters such as TV hosts or celebrities or fictional characters such as movie characters or cartoons. After 2 weeks, participants received instructions to uninstall the BWDAT extension and a financial incentive.

2.2. Tracking Data and Final Sample. In total, 693 viewing sessions of 94 participants were tracked. From these, 628 valid postsession surveys were completed, with those not completed within 1 h excluded ($n = 40$) to avoid the influence of factors other than the viewing situation. Viewing sessions lasting less than 10 min 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 nonbinary. At the time of data collection, they were all living in [country].

2.3. Power Calculation. Before the start of the data collection, the sample size was determined with a spreadsheet adapted from Scherbaum and Ferreter [62], based on the formulas of Raudenbush [63] and Snijders and Bosker [64]. The goal was to find a 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. Based on studies with the same design (e.g., [65]), we assumed participants to engage on average in four viewing sessions per week. Using this estimate for a two-tailed test with $\gamma_{01} = 0.05$ ($Z_{1-\alpha/2} = 1.96$), a medium variance ($\rho = 0.1$), an estimated standard error of $\gamma_{01} = 0.005$, a small effect, and a desired power of ≥ 0.90, the simulations showed that a sample of 100 participants and usage tracking for 2 weeks is needed (see OSF).

Due to the loss of data based on participants not engaging in one valid usage session ($N = 6$) and the processes described above, the final sample was marginally smaller. However, based on Arend and Schäfer's simulation studies for multilevel analyses [66], with a medium intraclass correlation coefficient (ICC) (as we found it in our data) and on average four viewing sessions (Level 1) for 94 participants (Level 2), the minimum detectable effect size with our achieved sample is 0.18. Thus, small to medium effects were still detectable with a power of ≥ 0.80. Based on this, we conclude that the sample is suitable to conduct the planned analyses.

2.4. Tracking Data. For all content watched, we tracked the content's title and, if applicable, season and episode number, with the time stamp of the viewing session.

2.4.1. Extension of Viewing Sessions. The duration of each viewing session was assessed through the 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 to complete the PSE measurements, 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 [67].

2.5. Survey Measures. All items were measured using a 5-point Likert-type scale from 1 (e.g., "do not agree at all") to 5 (e.g., "fully agree"). The full scales (Itemoverview) and

item descriptives (DescriptivesMeasures) are available on OSF. Cronbach's alpha was calculated with *psych* [68] and for constructs on the session level with *multilevel reliability* [69].[2]

2.5.1. Viewers' Usage Motives. In the presession survey, viewers' viewing motives were assessed. As no specific scale exists to assess viewing motives as situational constructs, we used an adapted version of Rubin's [25] television viewing motives, following other studies in parasocial research (e.g., [29, 70]). Only slight adaptions were necessary to change from television ("I watch TV") to Netflix ("I watch Netflix…") and for the situational assessment (e.g., "I watch because I have nothing better to do" instead of "I watch when I have nothing better to do"). Each viewing motive, namely, companionship (M = 2.29, SD = 1.41), social interaction (M = 1.43, SD = 0.94), 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 (e.g., I watch because I have nothing better to do"). 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., [71, 72]).

2.5.2. Self-Assessed Viewing Intensity. After each viewing session, the participants were asked about its perceived intensity (M = 3.99, SD = 1.09, $\alpha = 0.93$) with three items derived from Pittman and Steiner's [50, 73] experimental manipulation of viewing attentiveness (e.g., I was really focusing on the content I was watching).

2.5.3. Media Character. After each viewing session, participants were asked, "please think briefly about the characters who appeared in the content you have just watched on Netflix. Which character engaged your attention the most?". The character they named was then used as a placeholder in the subsequent PSI/PSR items. In 36% of the viewing sessions, viewers indicated that no character engaged their attention in any way and therefore skipped the subsequent PSI/PSR measures.

2.5.4. PSIs. PSIs (M = 3.82, SD = 0.71, $\alpha = 0.93$) were assessed with six items of Schramm and Hartmann's [9] PSI-Process Scale (e.g., I intensely thought about the behavior of [*character*]"). The scale was chosen since it fits the study's setting with self-directed media consumption on Netflix as it applies to a variety of media characters and contents [9] and it is an established scale to measure PSI in the sense of viewers' processing of media characters during media exposure [5].

2.5.5. PSRs. The PSRs (M = 3.03, SD = 1.06, $\alpha = 0.93$) were examined using eight items (e.g., I think [*character*] could be a friend of mine) of the parasocial friendship scale [74]. This multidimensional PSR scale consists of two parts: friendship and romantic love, and the selected items assess parasocial friendship [74]. The scale is validated and well-established in the PSR literature [5].

2.5.6. Multitasking, Coviewing, and Social Viewing. Content-unrelated multitasking was split into three categories, following Jeong and Hwang [21], 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 nonmedia task (e.g., cooking; 25%).

The participants were asked if they exchanged with coviewers about the content and if they had done so virtually with two items based on other studies (e.g., E. L. [34, 75]). Viewers engaged in content-related multitasking with physically present others in 10% of the sessions and in 3% with virtually present others.

2.6. Analysis. The data collected is multilevel data, as the viewing sessions (Level 1) are always connected to a participant (Level 2). Because not all participants have the same number of viewing sessions (Min = 1, Max = 21, M = 3.92, SD = 3.76), it constitutes an unbalanced multilevel data set. To respect these data set characteristics, multilevel analyses were conducted with the R packages *lme4* and *lmerTest*. With these packages, a linear mixed effects model can be estimated with data on both levels: viewing sessions on Level 1 and participants on Level 2 [76]. First, the ICC can be estimated in the null models only containing the dependent variable. The ICC shows the amount of variance explained through Level 2 factors. Then, the variables can be added as independent variables.

3. Results

Overall, the ICCs in both models show that about 40% of the variance in PSI/PSR was explained by the viewers (Level 2), meaning that an important amount of the variance was explained by factors connected to the viewing session.[3] These results underline the assumption that situational factors are important for PSIs/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 did 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 nonmediated 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 nonmedia 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 PSIs/PSRs. The number of episodes did not influence PSIs/PSRs (H5a and H6a rejected). The duration of viewing sessions influenced neither PSIs nor PSRs (H5b and H6b

TABLE 1: Influence of viewing motives on viewers' parasocial interactions and relationships.

	Parasocial interactions			Parasocial relationships		
Fixed effects	*Estimate*	SE	*p*	*Estimate*	SE	*p*
Intercept	3.30	0.25	< 0.001	2.67	0.37	< 0.001
Companionship	0.03	0.03	0.342	−0.02	0.05	0.639
Habit	0.02	0.03	0.580	0.07	0.05	0.209
Pass time	−0.01	0.03	0.728	0.05	0.05	0.309
Entertainment	−0.01	0.04	0.878	−0.04	0.07	0.607
Social interaction	0.13	0.05	0.007	0.01	0.07	0.923
Escapism	0.06	0.03	0.022	0.06	0.04	0.144
Random effects	*Variance*		SD	*Variance*		SD
Intercept	0.21		0.46	0.38		0.62
Residual	0.32		0.57	0.78		0.88
ICC	0.40			0.33		

Note: 284 viewing sessions of 79 participants.
Abbreviation: 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	*Estimate*	SE	*p*	*Estimate*	SE	*p*
Intercept	3.78	0.07	< 0.001	2.97	0.11	< 0.001
Multitasking with the same device	−0.07	0.11	0.557	−0.33	0.17	0.051
Multitasking with another device	−0.05	0.08	0.549	0.09	0.13	0.467
Multitasking with nonmedia	−0.20	0.09	0.025	0.08	0.13	0.545
Coviewing (physically present)	0.13	0.12	0.273	0.31	0.18	0.095
Social viewing (virtually present)	0.41	0.21	0.055	−0.13	0.31	0.685
Random effects	*Variance*		SD	*Variance*		SD
Intercept	0.18		0.43	0.46		0.68
Residual	0.32		0.57	0.72		0.85
ICC	0.36			0.39		

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

TABLE 3: Influence of viewing extensiveness on their parasocial interactions and relationships.

	Parasocial interactions			Parasocial relationships		
Fixed effects	*Estimate*	SE	*p*	*Estimate*	SE	*p*
Intercept	2.66	0.16	< 0.001	2.57	0.26	< 0.001
Number of episodes	0.01	0.01	0.652	0.03	0.02	0.295
Duration of viewing session	0.15	0.09	0.083	−0.23	0.14	0.089
Self-assessed viewing intensity	0.23	0.03	< 0.001	0.17	0.05	0.001
Random effects	*Variance*		SD	*Variance*		SD
Intercept	0.17		0.41	0.45		0.67
Residual	0.28		0.53	0.71		0.84
ICC	0.38			0.39		

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

rejected). Self-assessed viewing intensity increased viewers' PSIs and PSRs, supporting H5(c) and H6(c).

4. 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 (duration, number of episodes, and watching intensity) 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 [25], 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. Aligning with the uses and gratifications theory [77], viewers' motives for social interaction led them to enjoy the PSEs during media exposure more, resulting in increased PSIs. However, viewers seem to seek these PSEs only during media exposure, and an increased situational motive for social interactions is reflected only in enhanced PSIs but not in PSRs going beyond media exposure. 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 [9]. 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.

In future research, besides the classical viewing motives based on Rubin [25], other types of viewers' motives could be considered. For example, people's viewing motives could also be differentiated in hedonic and eudaimonic [78]. In this sense, not only people's search for pleasure and entertainment but also their need for meaningfulness, connectedness, and well-being could be included [79]. Another future research avenue could be the integration of emotional arousal, based on the affective disposition theory [80]. For example, the role of viewers' affective state during media exposure and the influence on PSEs could be examined [81]. Integrating these situational perspectives on viewers' motives to engage in media content with media characters in PSE research is necessary to get a more holistic understanding.

For content-unrelated activities [21], 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 [34]. 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 [43]. For the duration of viewing sessions and the number of episodes watched, we followed the approach used in binge-watching definitions limiting binge-watching to watching several episodes of "the same show" [82]. This was relevant for PSEs because studies have shown that the time spent with a character influences PSIs [83]. By limiting the duration and episodes to one show with the character, we came closer to real exposure to that character than including the whole watching duration of several different shows in the same sitting. Still, there are variances that are not controlled. For example, a protagonist appears more often than other characters. Based on the two-level model of PSI [1], the factors of obstrusiveness (e.g., how central is the character for a story) and persistence (e.g., how long is the character present in the media content), besides their addressing and physical appearance, should further be included to shed more light on the role of the media character in these parasocial encounters. Furthermore, given the increasing influence of algorithmic selection in media contents, design cues influencing users' perceptions of mediated encounters with characters (e.g., perceived reciprocity) [84] could be further included in future studies.

Overall, viewer PSRs were not influenced by the analyzed selected situational factors in this study. With that, the

study's findings align with the theoretical assumption that PSRs provide a long-term concept that can develop beyond media exposure [74]. PSRs are often assumed to be trait-dependent [85], 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.[4] 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.

To demonstrate that the situational factors had explanatory power beyond traditional predictors for PSI/PSR, we included viewer personality traits in exploratory analyses (reported on OSF). To do so, three predictors for PSEs were chosen that are often analyzed in parasocial research [86] with gender [87], loneliness (e.g., [24, 88–90]), and attachment style (e.g., [6, 91]). The additional analyses showed that most of the situational influences on PSI persisted, even when controlling for viewers' gender, loneliness, and attachment style. This underlines that situational factors have explanatory power for PSIs that are not covered in common analyses of viewer's personality traits. In future research, more attention should be given to situational factors, but especially to how personality traits, factors related to the character, and situational factors are intertwined and how different combinations of them influence PSEs.

Our approach of a field study combining tracking data and experience sampling with surveys triggered right before and after the media consumption comes with advantages and disadvantages. One major innovation is the analysis of PSEs in people's everyday media use, without experimental manipulation or viewing restrictions, resulting in a high external validity. However, the diversity of media content consumed and the diversity of media characters analyzed also strongly challenge the analysis. Further characteristics of the content watched (e.g., genres and repeated or first watching) are not controlled for in our analysis and could potentially influence the study's findings. Also, further characteristics of the media characters are not considered (e.g., fictionality or similarity); some of these factors were already proven relevant in this context in other similar studies [92]. Also, other factors such as algorithmic curation could be included to have a broader perspective on viewers' media consumption on Netflix, since artificial intelligence shapes PSEs, for example, by determining which characters viewers see, how often, and in what context [19]. To include this diversity of possible factors in the analysis of everyday media use and PSEs, qualitative approaches might be worthwhile in future studies. Also, we do not have more specific information about the concrete viewing situation than the variables assessed, so these viewing situations might be influenced by uncontrolled third variables we are not aware of. Further, one-item measurements have been proven valid (e.g., [71, 72]); however, there were no established scales available to assess viewing motives with single items. Such a validation or scale development would be necessary to disentangle situational viewing motives from stable traits (e.g., situational feeling of loneliness vs. trait loneliness) and would be very beneficial for future experience sampling studies. Thus, all these challenges must be considered when working with similar methodological approaches.

When interpreting the study's findings, some factors need to be considered. First, in a 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 to 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 PSIs/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 [93]. 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. Power calculations showed that medium effects were detectable; however, it is possible that some of the effects were too small to be detectable with our sample. As for some of the findings, the p value was close to the threshold of being significant; it could be worthwhile reanalyzing these relationships in future studies. If in future studies factors on Level 1 (participants) or interactions between Level 1 and Level 2 variables should also be considered, there is a need for a bigger sample on Level 1. The inclusion of such interactions (e.g., between trait loneliness and situational need for companionship) could be very fruitful. With that, we also need to acknowledge that, despite our naming of situational factors, it is possible that they are also intertwined with stable personality traits. For example, an individual's need for companionship might be higher after spending the whole weekend sick at home than after spending a long weekend with friends. However, for an individual with a generally higher level of loneliness, this need for companionship might always be stronger than for socially well-integrated individuals. Therefore, future studies should further explore the influence of combinations of viewer or media character characteristics and situational factors.

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 PSIs/PSRs or have been misused by participants to abbreviate the survey. The frequency with 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. Fourth, this study explored only some situational factors that potentially influence PSIs/PSRs. This nonexhaustive 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 and on public transport), the presence of other people (e.g., number of people and relationship to them), or devices used (e.g., smartphone screen, TV, and 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-life interactions and relationships should be assessed. Nevertheless, this study provides an important contribution in demonstrating that PSIs are strongly influenced by situational factors and future research should consider these influences next to often-analyzed characteristics of media characters and viewers, and possible combinations thereof.

The study's findings have some implications for platform design, media producers, and the algorithmic curation on such video streaming platforms. First, the frequency of the chosen option that media characters are not relevant is important. 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. This promotes not only the platform's content (e.g., binge-worthy shows) but also the mode of watching it (e.g., whole seasons in one sitting). Second, the negative effect of content-unrelated multitasking stresses the importance of viewers' general attention to the media content relevant for media content and character processing. This finding implies that media content and characters need to be created in a way that catches viewers' attention deeply and which decreases their multitasking behavior unrelated to the media consumption. Third, the study showed the relevance of self-perceived viewing intensity rather than the mere duration for the experience of PSI/PSRs. This underlines other perspectives in media studies, underlining that it is rather the qualitative engagement that predicts deeper processing than the mere time spent (e.g., "attentional economy," [94]; "algorithmic engagement loops," [19]). For media producers or platform creators, this means that fostering encounters between media users and media characters that enhance deep psychological processing might be beneficial.

Data Availability Statement

The data that support the findings of this study are openly available in OSF at https://osf.io/ceb9n/.

Conflicts of Interest

The authors declare no conflicts of interest.

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Endnotes

[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" ([69], p. 44).

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

[4]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.

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