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# The Role of Parasocial Interactions for Podcast Backchannel Response

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# **The Role of Parasocial Interactions for Podcast Backchannel Response**

*Completed Research*

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## **Abstract**

Voice-based information transfer via podcasts is increasingly taking root in education, entertainment, and business communication. In mainstream literature, they have been repeatedly associated with the concept of parasocial interactions and relationships, meaning a psychological relationship experienced by a consumer of a mass medium. However, little research has been conducted to empirically examine such experiences in the context of podcasting. Based on the theoretical background of the two-level model of parasocial interactions, we performed an experiment with between-subject design ( $n = 28$ ), in which participants of both experimental conditions listened to modified podcast episodes. The sharing of personal information, thoughts and feelings by the speaker was found to have a positive influence on the intensity of parasocial interaction. Furthermore, the experienced parasocial interaction correlates with the intention of listeners to subscribe to the podcast and make use of backchannels. These preliminary results may contribute to a better understanding of interactions in auditory media such as podcasts but also voice-operated information systems. Moreover, this study may help practitioners to align their audio-branding in a way that it fosters parasocial interactions and long-lasting customer relationships.

## **Keywords**

Podcasting, parasocial interactions, parasocial relationships.

## **Introduction**

Over the past decade, podcasts have established themselves in mainstream media consumption. In the United States, according to a recent study, about 70% of people over the age of 12 know what a podcast is and more than 50% have listened to a podcast themselves (*The Infinite Dial*, 2019). Another poll found that 45% of monthly podcast listeners have a yearly household income of more than 75,000 US Dollars (Winn 2019). Companies gradually recognize the growing fandom around podcasting, which primarily takes place on platforms such as iTunes, SoundCloud and Spotify. Abstractly, a podcast is a series of episodes, typically in audio format, which is broadcasted in the form of individual, regularly recurring episodes (Swiatek 2018). In a shifting media landscape, podcasting constitutes a unique way of communicating. The medium enables individual creators but also larger organizations to establish a direct line to stakeholders and can easily be distributed via social media. Podcasting can also provide proof of concept for other formats such as audio-visual communication (Chung and Kim 2016). Podcasts are perceived as a rather personal and authentic medium that can convey a pronounced feeling of connection and intimacy to the podcasting person (Berry 2006; Swiatek 2018).

It is repeatedly linked to the concept of parasocial interactions (PSI) and parasocial relationships (PSR) (Horton and Wohl 1956), and it is pointed out that in the course of use, a corresponding experience can

occur among listeners (Şendağ et al. 2018). Perks and Turner (2019) even refer to podcasts as "*pathways to parasocial relationships*" (p. 13). PSI and PSR have been investigated in many ways, for example for local TV news (Rubin et al. 1985), advertising in social media (Hwang and Zhang 2018), characters in books (Liebers and Schramm 2017) or radio (Savage and Spence 2014). PSI, according to Klimmt, Hartmann and Schramm (2006), is the sum of mental, emotional and behavioral processes that occur as a reaction to the media personality. Although a number of scholars, marketers, and publicists have repeatedly proclaimed the connection between podcasts and the experience of PSI, a scientific consideration that provides empirical evidence along this line is still missing. Therefore, the aim of this paper is to address this gap and to investigate the following research question:

**RQ:** *How do parasocial interactions affect the listener's intention to engage with a podcaster?*

We hitherto performed an experiment with between-subject design (n = 28), in which participants of both experimental conditions listened to modified podcast episodes. A subsequent survey tested if and how participants experienced PSI. Results from this study contribute to IS research because voice-based information transfer through means of auditive media is related to the research stream of understanding the relationship between users and technology-mediated communication (Hwang and Zhang 2018). Apart from researchers in the realm of audio-based information systems, the outcome of this study provides knowledge for practitioners trying to enrich strategic audio-branding efforts with elements that consolidate the relationship with existing or prospective customers.

The paper is structured as follows. In section 2, the literature around podcasting and its legitimization in IS literature will be considered. Based on this literature review, associated hypotheses are derived. Section 3 presents the research design, before preliminary results are presented (section 4), and discussed (section 5). The paper concludes with limitations and next steps (section 6).

## **Research Background**

### ***Applications of Podcasting***

The term podcast resulted from a combination of the iPod, Apple's mp3 player, and the English term for broadcast (Shim et al. 2006). Although video podcasts have also been the subject of past research (Kratochwill et al. 2016), the focus of most scientific debates is on audio podcasts (Koo and Sze 2006; Şendağ et al. 2018; Swiatek 2018). With low barriers of entry to the production mode, professional podcasts with a commercial background as well as productions from the private amateur range can be differentiated (Campbell 2005). Podcasts address a variety of audiences with the purpose of entertainment, leisure, or education, mainly presented the form of conversations (Beege et al. 2017). In addition to the recurring broadcasting format, parallels between podcasts and radio are also frequently emphasized with regard to programming. Berry (2006) describes the medium as "*radiogenic*" (p. 155), because it is characterized by combinations of music and conversation elements, as they typically occur in radio. Podcasts are typically consumed via apps on smartphones that offer large directories of different genres, and the possibility to subscribe to specific feeds (Chung and Kim 2016).

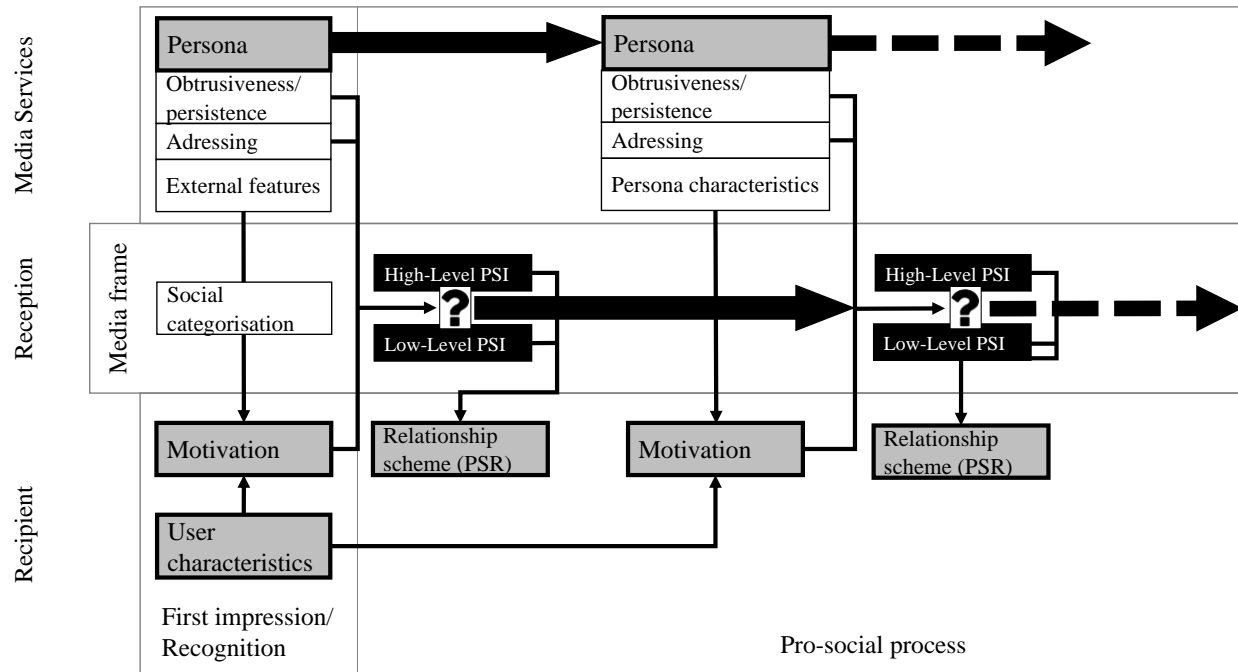
The application areas of podcasts are diverse. Apart from their deployment for educational purposes (Shim et al. 2006), organizations turn to podcasting as means for audio-branding and to connect with stakeholders. In this context, a growing emphasis on multi-sensory brand management can be observed (Hultén 2011; Müller and Kirchgeorg 2011; Westermann 2008). Sound and voice elements have played a subordinate role in organizational branding for a long time, even though they have distinctive advantages over visuals when it comes to delivering messages. The human brain, for instance, absorbs information more quickly when soundwaves directly enter the brainstem (Westermann 2008). Within the last decade, podcasting evolved from a niche medium to almost a mainstream channel for brand communication. Organizations begin to acknowledge the value of podcasting for their brand management, especially when embedded in an existing social media concept (Hanna et al. 2011).

### ***Two-Level Model of Parasocial Interactions***

To concisely define the concept of PSI, we turn to Liebers and Schramm (2019), who pointed out that certain ambiguity has been present in the literature as PSI and PSR are often not clearly differentiated. However, as this paper focuses on PSI, we go along with the following understanding:

*“The term ‘parasocial interaction’ describes a one-sided mediated form of social interaction between the audience and media characters. In doing so, they assume PSI to be similar to face-to-face interactions between two individuals except that PSI lacks mutuality while real social interactions feature bidirectional communication.” (Liebers and Schramm 2019, p. 5)*

In order to operationalize this concept, we fall back on the Two-Level Model of Parasocial Interactions (2LM) developed by Hartmann et al. (2004). The authors consider PSI as a process of confrontation with a persona that occurs in recipients whenever *“the persona is a visually and/or audibly recognizable component of the media offering”* (p. 30). The advantage of the 2LM is that it clearly distinguishes between PSI and PSR, integrates individual findings on PSI and takes various influencing factors of PSI into account (Klimmt et al. 2006). With the PSI Process Scales (Schramm and Hartmann 2008), a measuring instrument based on the model is also available. The complete 2LM is shown in figure 1.



**Figure 1. Two-Level Model of Parasocial Interactions (2LM)**

PSI is preceded by a short and unconscious processing phase in which the recipient first perceives the persona and then classifies it as a social being with which it can interact. Depending on whether experience values for the persona consist of earlier reception situations or not, either *“impression formation”* or *“recognition”* takes place (Hartmann et al. 2004). However, in this paper, we focus on the mere experience of PSI. The latter basically consists of a total of three sub-processes. The first process is a cognitive sub-process, which consists of all information-processing that occurs in recipients with regard to the self-disclosure of the persona. Self-disclosure describes the verbal communication of personal information (Cozby 1973). Formulations that indicate a personal reference to the respective statement, such as *“I feel”* or *“I think”*, can serve as a linguistic indicator (Greene et al. 2006). The second process is an affective sub-process, which is composed of all sensations that occur in recipients regarding the persona or that are caused by the persona (Hartmann et al. 2004). Feelings such as sympathy and empathy play a central role here. The third is a behavioral sub-process, which consists of motivational aspects and behavioral patterns that the recipient shows during the confrontation with the person. These behaviors include, for example, all mimic, gestural and verbal expressions towards the persona that occur in the course of reception (Klimmt et al. 2006).

Exact guideline values for the assessment of these characteristics are not given in the literature. According to Klimmt et al. (2006), the intensity of PSI can be influenced causally by influencing factors of both the recipient and the persona. Basic influencing factors of the persona are obtrusiveness, persistence, addressing and external features. Obtrusiveness refers to how much the persona is placed in the centre of events and persistence refers to how consistently this happens. Addressing refers to how directly the

persona addresses the audience, whereas external features include all visible features of a persona. In line with previous research on PSI, we derive three distinct hypotheses, which underly our experiment.

H1: *Elements of self-disclosure positively affect the intensity of PSI compared to no self-disclosure.*

H2: *The intensity of the PSI when listening to a podcast episode positively affects the intention to subscribe to the podcast.*

H3: *The intensity of the PSI when listening to a podcast episode positively affects the intention to use communication channels leading to the podcaster(s).*

## **Research Design**

To test the hypotheses, a laboratory experiment with an in between-subject design was conducted (Charness et al. 2012). Participants were recruited through an advertisement on social media and an internal university forum. They were randomly assigned to one of the two experimental conditions and first read briefing. In both groups, each participant heard a prepared excerpt of a podcast episode. In the episode of the experimental group, the speaker increasingly expressed personal information and thoughts. The control group heard the same episode but without any of these personal statements, which were meant to induce PSI. Subsequently, the participants filled out questionnaires to check for manipulation of self-disclosure, PSI, subscription intention and intention to use communication possibilities. The following sections describe the selection and preparation of the stimulus material, the measuring instruments used and the conduct of the experiment.

### ***Selection of the Podcast Episode***

In existing studies investigating the influence factors of PSI, actors were engaged who show the necessary behavior to produce appropriate stimulus material for the experimental conditions (Hartmann and Goldhoorn 2011). Since this possibility was not available, existing media material was manipulated. The starting point was an episode of the German podcast “*Forschergeist*”. It is published by “*Stifterverband*” and produced by the Metaebene Personal Media production studio. The selected episode with the title “*FGO55 Die Kunst des Wissens*” (engl. “*The Art of Knowledge*”) was published on March 28, 2018 on the accompanying website of the podcast (<https://www.stifterverband.org>). This particular podcast was chosen because of its high reputation on leading podcast platforms such as iTunes and Spotify, popularity a professional level of production. The guest of this episode was Harald Lesch, astrophysicist, professor of physics, and well-known TV host. He thus represented the persona of the investigation. The PSI of the participants was therefore measured in relation to his person. Both the podcast and the episode offered various advantages in its composition, e.g., self-disclosure elements provided by the persona, and were therefore suitable for use in the context of the study. Moreover, this particular episode was chosen as it is published under Creative Commons license 4.0., which allowed us to remix it.

### ***Preparation of the Podcast Episode***

The participants in both test conditions heard an abbreviated version of the selected podcast episode with prepared content. The source material did not contain continuous sections of sufficient length in which the persona increasingly expressed personal information. Statements that were to be evaluated as a form of self-disclosure were found in different places throughout the conversation and often appeared together with personal statements. According to Auter (1992), coherent narratives are better suited to the emergence of PSI than individual excerpts, since continuous material resembles a real interaction more closely. In order to create suitable stimulus material for the experimental conditions, individual parts of the original material were therefore combined to form two shortened episodes. The audio material was edited using the free editing software Audacity. The introduction and credits of the original episode were isolated and used in both experimental conditions in order to create a uniform beginning and end of the conversation. This created the impression of a complete podcast episode. The introduction consisted of a music introduction, a short moderation by the host and the introduction of the conversation guest. For the material of the experimental group, a total of seven segments that contained self-disclosure by the persona were identified (e.g., 00:05:35-00:07:48). This section consisted of a multitude of personal statements, which, for example, contained purely descriptive information about the persona (e.g., “*I was born in the sixties*”, 00:05:46) or

judgmental statements about his own thoughts (e.g., *"I thought I had lost my mind"*, 00:07:15). This deliberate expression of personal thoughts and opinions is a form of self-disclosure (Collins and Miller 1994). All segments of self-disclosure found in the episode were removed for the control group. We used filler material such as breathing sounds to smooth the transitions where the episode was cut. The total length of the experimental episode was 16:52 minutes and the control episode 16:27. Hence, this slight difference in length should not affect the experience of PSI. Despite the modifications, the logical configuration of the episode remained intact, with no signs of intermissions due to the cuts we had to make.

### Measurements

The PSI Process Scales (Schramm and Hartmann 2008) were used to assess the PSI of the listeners. The content of the items is based on the three PSI sub-processes described in the 2LM (Hartmann et al. 2004). Schramm and Hartmann (2008) were able to prove the reliability and validity of the measuring instrument. It comprises 112 items which refer to the cognitive, affective and behavioral reactions of the recipients. Table 1 provides item examples for each of the measure PSI subprocess defined by (Schramm and Hartmann 2008).

PSI subprocess	Exemplary Item
Cognitive personalized information intake	The speaker kept pulling my whole attention to himself.
Understanding the situation and actions of the persona	I have been thinking intensely about what the speaker said.
Affective sympathy	There were moments when I greatly admired the speaker.
Antipathy	There were moments when I really despised the speaker.
Empathy	I was always full of compassion for the speaker.
Conative non-verbal behavior	I reacted physically to the speaker.
(Para-)verbal behavior	I have commented my impression of the speaker with audible utterances.
Behavioral Intention	In some moments I would have liked to get in touch with the speaker.

**Table 1. Exemplary selection of PSI measurement**

Some of them refer to the reception of information by the recipient and the reflection on the persona (e.g., *"(persona) repeatedly drew all my attention to itself"*). Other scales serve to query the affective processes. These refer to sympathy, empathy and to the extent to which recipients are infected by the feelings of the persona (e.g., *"(persona) one simply has to like."* (Schramm and Hartmann 2008). Scales on behavioral processes ask for verbal and non-verbal reactions as well as behavioral intentions towards the persona (e.g., *"I literally reacted physically to (persona)"*, p. 7). A five-step response scale was used, on which participants should indicate their agreement with the respective statement (1 = do not agree at all, 5 = agree completely). Formulations relating to visual perception had to be changed (e.g., *"I can now remember exactly what (persona) looked like"*, (p. 2).

In order to control the success of the experimental manipulation of self-disclosure in the experimental conditions, a manipulation check was therefore carried out (Foschi 2014). The self-disclosure questionnaire by Jourard and Lasakow (1958) is cited as the methodological standard for the assessment of the construct (Field 2009; Wheelless and Grotz 1976). Table 2 provides an exemplary selection of modified items of self-disclosure, which are taken from (Cayanus and Martin 2004).

Original Item	Modified Item
My instructor expresses his/her beliefs.	The speaker has expressed his personal thoughts and opinions.
My instructor reveals personal information about his/her personal life.	The speaker reveals personal information about his/her personal life.
My instructor often gives his/her opinions about current events.	The speaker often gives his/her opinions about current events.
My instructor seldom talks about him/herself.	The speaker seldom talks about him/herself.
My instructor shares his/her dislikes and likes.	The speaker shares his/her dislikes and likes.
My instructor discusses his/her feelings.	The speaker discusses his/her feelings.
My instructor rarely discusses his/her personal life.	The speaker rarely discusses his/her personal life.

**Table 2. Selection of items for self-disclosure manipulation check**

The items about the subscription intention of the listeners and the intention to use return channels were based on the items of previous research, which also investigated behavioral intentions in the context of the use of different applications. They are to be classified as valid and reliable measuring instruments according to the respective authors (Koo and Sze 2006). Examples are provided in table 3.

Original Item	Modified Item
Assuming that I have access to mobile banking systems, I intend to use them. (Luarn and Lin 2005)	Assuming that I have the possibility to subscribe to the podcast/get in contact with the podcaster, I intend to do so.
I intend to subscribe to Boilercast in the next couple months. (Koo and Sze 2006)	I intend to subscribe to this podcast/get in contact with the podcaster in the next couple of months.
I intend to continue using OBD rather than discontinue its use. (Bhattacharjee 2001)	I intend to continue listening to this podcast/engage with this podcast rather than discontinue its consumption/my engagement.

If I could, I would like to discontinue my use of OBD (reverse coding) (Bhattacharjee 2001)	If I could, I would like to discontinue my consumption of this podcast/ my engagement with this podcast
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**Table 3. Exemplary items for the intention to use backchannels.**

The participants were randomly assigned to one of the two test conditions and first read an information text about the background and the course of the study. To keep basic knowledge constant, an information text on podcasts was therefore presented in both conditions before the stimulus material was presented. In order to exclude sounds and social influences as possible interference factors in the measurement, the podcast episode was presented via headphones and the person performing them left the room during reception. Subsequently, the questionnaire was presented to each participant. The total time investment to complete the experiment was one hour.

## Results

The evaluation was carried out by calculating descriptive characteristic values, mean value comparisons and correlation analyses in IBM SPSS Statistics. A total of 28 participants took part in the experiment, which were equally distributed to both groups. The age of the participants was between 19 and 60 years (Md = 28, M = 31.1, SD = 11.0). The randomization resulted in a comparable composition of age, sex and number of persons in the experimental group (Md = 27, M = 29.5, SD = 10.2, n = 14, 71 % female participants) and the control group (Md = 29.5, M = 32.6, SD = 11.9, n = 14, 36 % female participants). For the evaluation of the scales collected, the response values of negatively polarized items were inverted, so that high response values consistently reflected the higher expression of the construct measured by the respective scale (e.g., recoding from 1 to 5). From the numerical response values of the scales for self-disclosure, PSI, subscription and return channel intention, a sum value was first calculated per participant and then an average value, which was used for further analyses. The Shapiro-Wilk test was performed to check the normal distribution of the data as a prerequisite for the use of parametric test methods (Collins and Miller 1994). Accordingly, the average response values of Self-Disclosure and PSI were almost normally distributed in both test conditions ( $p > .05$ ). The data on subscription and return channel intentions, on the other hand, showed no normal distribution ( $p < .05$ ) and were therefore evaluated using non-parametric methods. The manipulation of self-disclosure was checked using a t- test for independent samples (Hartmann and Goldhoorn 2011). To evaluate the hypothesis, the mean value was used, which was calculated over all three PSI subprocesses (Hanna et al. 2011). In table 1, the values that were obtained for the individual PSI subprocesses of the groups are reported.

Overall, the listeners of both groups expressed a moderate subscription intention (M = 2.04, SD = 1.00, n = 28) and PSI (M = 2.77, SD = 0.55, n = 28). As previously stated, the assumption of normal distribution was violated for the subscription intention of the listeners, so that the non-parametric ranking correlation coefficient was calculated according to Zar (1972). Based on the hypothesis, the test was also performed unilaterally here. The results point to a significantly positive relationship between PSI and listening intention,  $r_s = .59$ ,  $p < .001$ ,  $R_s^2 = 0.35$ . According to Cohen (1988), this corresponds to a strong effect. H2 could thus be confirmed. From the services presented before the subscription intention was queried, the 42 participants selected 82% Spotify, 61% YouTube, 14% Audible, 14% Media libraries, 14% Podcast apps, 11% Twitch, 4% Deezer, 4% SoundCloud, 4% Website for a podcast and 0% Podcast portals. Participants were free to select multiple services simultaneously. The third hypothesis was that there was a positive correlation between listening PSI and the intention to use complementary communication channels. On average, listeners of both groups expressed a rather low intention to use communication services for feedback (M = 1.70, SD = 0.91, n = 28). Here, too, the non-parametric rank correlation coefficient according to Spearman was used, taking into account the non-existent normal distribution of the data (Collins and Miller 1994). Since a positive effect was postulated in advance, testing was one-sided. The results of the calculation showed a significantly positive correlation between PSI and the intention of the listeners to use return channels to the podcast ends,  $r_s = .33$ ,  $p = .041$ ,  $R_s^2 = 0.11$ .



According to Cohen (1988), this corresponds to an effect of medium strength. H3 could thus also be confirmed. Table 4 summarizes calculated PSI values.

	Experimental group		Control group		Significance			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>T</i>	<i>p</i>	<i>d</i>
Self-Disclosure	4.09	0.44	2.46	0.79	20.47	6.73	<.001	2,55
PSI	3.06	0.47	2.48	0.47	26	3.28	.002	1,23
Cognitive PSI	3.31	0.52	2.88	0.40				
Affective PSI	3.54	0.63	2.43	0.68				
Behavior PSI	2.30	0.63	1.82	0.62				

**Table 4. Calculated values for the PSI subprocesses.**

From the communication services presented before the return channel usage query, participants selected 93% e-mail, 75% Facebook, 75% YouTube, 61% Instagram, 25% Twitch, 18% Twitter, 11% Podcast Apps, 11% SoundCloud, 7% Website for a Podcast and 0% Podcast Portals. Multiple selection was also possible.

## Discussion

By confirming the first hypothesis, it could be shown that there is a difference in the PSI of listeners, depending on the extent to which the podcasting person expresses personal information in a podcast episode. Listeners in the experimental group, who were confronted with more personal statements from the speaker through experimental manipulation, reacted with a higher expression of PSI and showed higher overall values on the PSI subprocesses than listeners in the control group, who heard the episode with more impersonal statements. From this it can be concluded that it has a positive influence on the extent of PSI of listeners of a podcast when the podcast person reveals himself/herself and shares personal information with the listeners. The manipulation check following the reception of the episodes also indicates that elements of self-disclosure in the personal experimental condition were not only more strongly present through the technical preparation of the material, but were also perceived by participants more strongly than was the case in the impersonal condition. Consequently, it can be assumed that the effect found is likely to be due to self-disclosure on the part of the podcaster. This finding empirically confirms the previous assessments of various authors that the delivery of personal content is an integral part of the intimate character of podcasts and can influence the listening experience (Berry 2006; Campbell 2005; Swiatek 2018). These results strengthen the viewpoint that e.g. openness in corporate communication on the parasocial experience of consumers should be pursued (Labrecque 2014). Furthermore, this result is in line with the statements of podcast listeners from interviews conducted by Perks and Turner (Perks and Turner 2019). Individual listeners described the introduction of personal content as a subjectively perceived reason for building a PSR based on podcasts.

In addition, the second and third hypothesis were confirmed. The results show that there appears to be a positive relationship between the PSI when listening to a podcast episode and the intention of listeners to subscribe to the podcast. This is analogous to findings from radio and television research. (Quintero Johnson and Patnoe-Woodley 2016; Rubin et al. 1985). Hartmann et al. (2004) emphasize, for example, that the individual motivation of recipients to engage more deeply with a persona can have a decisive influence on the intensity of PSI. However, at this point, it is unclear if PSI can also be injected too much, i.e., the intensity of the PSI plateaus or declines after a certain point. Listeners who experienced a higher PSI during the reception of the podcast episode were also more likely to have an increased intention to provide feedback to the podcasters in the form of a message or comment via “backchannels” (Park et al. 2017). These findings can serve as an orientation for podcasters to design their own formats. If podcasters bring more personal programme content into the production and allow the audience to share their own experiences, thoughts and stories, this might lead to a more intensive confrontation of the listeners with the podcaster and his or her statements. Consequently, positive effects on audio-branding (Labrecque 2014), learning performance (Beege et al. 2017), and reputation management (Mirbabaie et al. 2019) can be assumed.

## Conclusion and Further Research

The aim of this work was to find out if and how PSI of listeners with podcasters and which could also contribute to the development of a PSR. An experiment in Between-Subject Design (n = 28) was conducted. All hypothesis was confirmed, meaning there is a difference in the intensity of PSI of podcast listeners, depending on whether the podcaster shares personal information. Moreover, the experienced PSI positively affects the intent to subscribe to the podcast and use backchannel communication, which may foster the development of a PSR. There are limitations with regard to the methodology and results applied. The PSI and behavioral intentions were queried after the reception, so the measurement may contain bias. Moreover, the number of participants at this stage is comparatively small. In further research, the experiment is aimed to be extended, involving more participants. Subsequently, we combine the results with a data-driven analysis of SoundCloud data. At the point of writing, we have collected a dataset of 41,342 podcasts by means of a self-developed crawler and SoundCloud's API. The data includes links to the audio files as well as meta data such as genre, length, comments, and timestamps of comments. Thanks to these platform-specific features, especially the timestamps, we will be able to trace back the interaction to the podcast feature. Consequently, we can obtain a better understanding of which exact features, apart from self-disclosure, foster (parasocial) interaction. This will be complemented by content and sentiment analysis of the respective podcast reactions. This mixed method approach would qualify for a seminal study on PSI in podcasting.

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