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That Sounds Familiar: The Relationship Between Listeners' Recognition of Celebrity Voices, Perceptions of Vocal Pleasantness, and Engagement with Media

Cynthia Vinney and Lisa A. Vinney

The human voice is a major component of popular media, yet its role in people's media experiences has received minimal research attention. To address this gap, we investigated how recognition of celebrity voices interacted with perceptions of and engagement with audio-only media. After listening to famous actors reading stories, participants indicated whether they recognized each voice, rated its pleasantness, and completed parasocial interaction and narrative transportation measures. Results indicate that recognized voices were perceived as more pleasant. Additionally, vocal pleasantness was associated with increased parasocial interaction and transportation. Findings partially support the prediction that vocal recognition enhances parasocial interaction.

Despite its importance, the impact of the human voice on people's engagement with media has received minimal attention in the literature. Yet, the frequent use of celebrity voices in voice-overs for radio and television ads, animated movies, video games, and audiobooks suggests that advertisers, marketers, and media producers believe recognizable voices will help attract and involve media audiences. The present investigation explores whether recognition of a celebrity voice is associated with positive impressions of and increased engagement with media. Specifically, we examined how recognition of the voice of an actor reciting a children's story relates to perceived vocal pleasantness, parasocial interaction, and transportation into the story the celebrity recited.

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Vocal Recognition and Vocal Pleasantness

Studies on voice indicate that a listener's perception and recognition of a voice can have a substantive impact on the listener's assessment of the speaker and, by extension, the message he or she is communicating (e.g., Anderson, Klofstad, Mayew, & Venkatachalam, 2014; Hodges-Simeon, Gaulin, & Puts, 2010; Ko, Sadler, & Galinsky, 2015; McAleer, Todorov, & Belin, 2014; Warhurst, McCabe, & Madill, 2013). However, research demonstrates that recognition via voice alone is difficult. For example, in one study, Damjanovic and Hanley (2007) found that people were more likely to recognize a celebrity's face than his or her voice. In addition, listening to a celebrity's voice was less likely to trigger episodic memories about that celebrity (i.e., specific facts or encounters) than seeing his or her face.

At the same time, however, a growing body of literature suggests that vocal quality may play a key role in a listener's experience of a speaker and the content of what he or she says (Anderson et al., 2014; Ko et al., 2015; McAleer et al., 2014; Ruscello, Lass, & Podbesek, 1988; Warhurst et al., 2013; Wolk, Abdelli-Beruh, & Slavin, 2011). For instance, voice disorders, which compromise vocal quality, may result in listeners perceiving a speaker more negatively (Isetti, Xuereb, & Eadie, 2013; Lass, Ruscello, Bradshaw, & Blackenship, 1991; Lass, Ruscello, Stout, & Hoffman, 1991; Ruscello et al., 1988). Likewise, physical and personality characteristics such as body size, approximate age, employability, dominance, attractiveness, trustworthiness, confidence, honesty, and likeability are often inferred based on perceived vocal attributes such as pitch and intensity (Anderson et al., 2014; Hodges-Simeon et al., 2010; McAleer et al., 2014; Warhurst et al., 2013). Moreover, studies have shown that speakers may modify their vocal quality based on their audience and the content they are delivering (Warhurst et al., 2013; Warhurst, McCabe, Yiu, Heard, & Madill, 2013). Thus, speakers appear to have an implicit awareness of how characteristics of their voice may be perceived by their listeners

In addition, research indicates that recognizing a speaker's voice can impact a listener's judgment of that voice. Specifically, the mere exposure effect states that repeated exposure to a stimulus may lead to an implicit preference for it (Zajonc, 1968, 2001). Possibly as a result of the mere exposure effect, Hughes and Harrison (2013) found that individuals rate their own voices as more vocally attractive than those of their peers. In their study, participants who rated several voice samples, including a sample of their own voice, rated their voice as significantly more attractive than the other voices and more attractive than other listeners who rated their voice. While participants may not have explicitly recognized their voice, it is possible that overall familiarity with their personal vocal features may have facilitated these higher ratings. Further, evidence suggests that familiar voices are processed by different neurological structures than unfamiliar voices (Latinus, Crabbe, & Belin, 2011) indicating that people may implicitly categorize voices differently based on whether they recognize them or not. Consequently, perceptions of a voice

encountered via media may be more positive when the listener recognizes the speaker's voice. This leads us to the following prediction:

H₁: Ratings of vocal pleasantness will be higher for individuals who recognize an actor's voice than for those who do not recognize the voice.

Parasocial Interaction

Furthermore, recognition may impact one's engagement with a voice. If one experiences a voice through media, recognition may lead to or enhance one's ability to engage in a parasocial interaction with the speaker. When Horton and Wohl (1956) originally introduced the concept of parasocial interaction (PSI) over 50 years ago, they defined it as a "simulacrum of conversational give and take" (p. 215) between a media user and media persona. Such interactions are one-sided and limited to the duration of the media consumption experience. However, varying conceptualizations and operationalizations of PSI in subsequent research have led to some confusion in the literature. In particular, PSI is often confused or conflated with the concept of parasocial relationship (PSR), illusory one-sided relationships between a media user and a media persona that extend beyond a given viewing situation and psychologically resemble real-life social relationships (Giles, 2002; Horton & Wohl, 1956). In fact, many existing measures, such as Rubin, Perse, and Powell's (1985) popular PSI scale, combine PSI questions about the media user's experience during media consumption with PSR questions about the media user's consideration of a media persona beyond the viewing situation (Hu, 2016). However, although these two concepts are related, they are distinct (Dibble, Hartmann, & Rosaen, 2016; Hu, 2016) and can influence one another such that PSI can lead to PSR (Giles, 2010), while PSR can strengthen instances of PSI (Hu, 2016).

Dibble and Rosaen (2011) have observed that PSI has often been conceptualized in terms of a positive interaction with a media persona such that the media figure is considered a friend (e.g. Rubin & McHugh, 1987; Rubin et al., 1985). PSI measures often reflect this perception by asking participants to answer questions based on their perceptions of a favorite media persona. Yet, research indicates that PSI is not limited to media personae that people like and that media users can experience PSI with both disliked media personae and media personae towards which they feel neutral (Dibble & Rosaen, 2011; Tian & Hoffner, 2010).

Past research has rarely examined whether voices alone elicit the kind of positive PSI that is often assessed with such classic scales as the PSI scale, although Horton and Wohl (1956) did mention the possibility of PSI with talk radio hosts in their article originating the concept. Since then, Rubin and Step (2000) used a 10-item version of the PSI scale (Rubin & Perse, 1987) to show that listeners experience PSI with talk radio personae. More recently, Quintero Johnson and Patnoe-Woodley (2016) used the same scale to demonstrate that a national sample of American radio listeners experienced strong PSI with their favorite radio personalities,

leading them to perceive the products recommended by the radio personalities more positively. Further, Semmler, Loof, and Berke (2015) used this scale to show that the use of audio-only voice-over narration during a television episode enhanced PSI and that positive evaluations of the narrating character enhanced PSI even further.

To our knowledge, however, the way vocal recognition may impact PSI with a speaker has not been explored. Yet, in keeping with the mere exposure effect (Zajonc, 1968), it is plausible that recognition of a media figure's voice could elicit the kind of positive PSI that was assessed in past research. In addition, if a media user recognizes a media persona's voice, it is possible their recognition is the result of a PSR with that media figure, leading their PSR to enhance PSI. Thus, we predict:

H₂: Levels of positive PSI will be greater for individuals who recognize an actor's voice than for those who do not recognize the voice.

Moreover, when a listener judges a voice as pleasant, that judgment may extend beyond the sound of the voice to impact the listener's engagement with what the speaker is saying. Thus, positive PSI is likely associated with perceptions of vocal pleasantness. As a result, we predict:

H₃: Higher ratings of vocal pleasantness will be correlated with higher levels of positive PSI.

Experience of Parasocial Interaction

Recently, Hartman and Goldhoorn (2011) proposed a new measure of PSI, called the experience of parasocial interaction scale (EPSI), which equates the PSI experience with the attributes of a real-life social interaction. EPSI "is characterized by a felt reciprocity with a TV performer that comprises a sense of mutual awareness, attention, and adjustment" (Hartman & Goldhoorn, 2011, p. 1107). The researchers demonstrated that several factors of the media persona's presentation could cause a media user to engage in EPSI including the persona's style of address. Studies have shown that formal characteristics of a media message can enhance EPSI, such as bodily address in which the media persona physically adjusts his or her body language to the media user and verbal address in which the media persona verbally acknowledges the media user through direct reference or by adjusting his or her language to the expected audience. Research suggests that EPSI is generally strongest when media users are addressed both bodily and verbally (Cummins & Cui, 2014; Dibble et al., 2016; Hartman & Goldhoorn, 2011). In contrast, Semmler et al. (2015) found that voice-over narration during a television program in which the main character verbally addresses the audience did not enhance EPSI. However, Quintero Johnson and Patnoe-Woodley (2016) showed that listeners feel moderate EPSI with their favorite radio personalities. This result demonstrates that in some

cases EPSI can be elicited by verbal address alone, perhaps when a media user is familiar with the media persona to whom they are listening.

Dibble and colleagues (Dibble et al., 2016; Dibble & Rosaen, 2011) demonstrated that the EPSI scale measures a different construct than A. M. Rubin and colleagues' PSI scale (Rubin & Perse, 1987; Rubin et al., 1985) and suggested that the EPSI scale "seems better able to address PSI reactions while viewing" (Dibble & Rosaen, 2011, p. 129). We wanted to investigate whether EPSI extends to interactions with famous actors' voices. Although listening to a voice does not offer the bodily address that has been shown to enhance EPSI, Quintero Johnson and Patnoe-Woodley's (2016) findings indicate that recognition of a voice may enable a listener to more easily imagine a mutual awareness with the media persona based on past interactions with him or her. Thus, we will explore the following research question:

RQ₁: Are EPSI levels greater for individuals who recognize an actor's voice than for those who do not recognize the voice?

It is also possible that positive perceptions of vocal quality will enable an individual to more easily become engaged with a speaker, enhancing the listener's EPSI. To explore this possibility, we propose the following research question:

RQ₂: Are higher ratings of vocal pleasantness correlated with higher levels of EPSI?

Transportation

While parasocial phenomena are specific to the connections a media user makes with a media figure, transportation involves a media user's engagement with a media narrative as a whole. When one is transported into a narrative he or she becomes immersed in the story (Green & Brock, 2000). Transportation is conceptualized "as a distinct mental process, an integrative melding of attention, imagery, and feelings" (Green & Brock, 2000, p. 701). A media user can experience transportation whenever they come across a narrative, regardless of the medium through which it is presented.

Moyer-Gusé (2015) observes that transportation and PSI are qualitatively different processes. While the media user experiencing PSI is thought of as a relational partner who maintains self-awareness, the media user experiencing transportation will have "reduced self-awareness as s/he becomes absorbed into the [narrative]" (Moyer-Gusé, 2015, p. 287). In his theoretical model of audience engagement processes, Brown (2015) envisions PSI and transportation as the ways in which audiences initially become involved with media figures. Brown (2015) posits that PSI can cause transportation, transportation can cause PSI, or PSI and transportation can happen at the same time. Transportation is often a desired state for consumers of stories as it allows them to temporarily forget about real-world concerns (Green & Brock, 2000; Green, Brock, & Kaufman, 2004). Furthermore, transportation has been

shown to influence beliefs and attitudes, with highly transported individuals developing more story-consistent beliefs than less transported individuals (Green & Brock, 2000).

Like the research on PSI, research investigating how audio channels influence transportation during media use is limited. On the one hand, Zheng (2014) discovered that individuals who were more transported into radio ads that employed a narrative format were more persuaded by the ads. On the other hand, Semmler et al. (2015) found that voice-over narration during a television episode did not enhance transportation. To our knowledge, there has not been any research regarding the impact of recognition of a media persona's voice on a media user's ability to experience narrative transportation. Given the dearth of existing research, we ask the following research question:

RQ₃: Is transportation greater for individuals who recognize an actor's voice than for those who do not recognize the voice?

Further, as noted earlier, negative perceptions of vocal quality can cause listeners to perceive a speaker negatively. Such negative perceptions of vocal quality may be distracting, diminishing listeners' ability to be transported into a story. In contrast, it is possible that positive perceptions of vocal quality may increase narrative transportation. To investigate this possibility we propose the following research question:

RQ₄: Are higher ratings of vocal pleasantness correlated with higher levels of transportation?

Method

Participants and Procedure

One hundred fifty-six students (151 female; $M_{age} = 20.72$, $SD = 1.979$) in communication sciences and disorders classes at a Midwestern university took part in the study. Participants were asked to complete an online survey on their own time in return for course credit.

After completing a pre-test asking about their familiarity with and liking of several famous actors, research participants listened to three audio clips that were 3 to 5 minutes in length. Each clip featured one of the following famous actors reading a different children's story: Annette Bening, known for movies such as *The Grifters* (1990), *American Beauty* (1999), and *The Kids are All Right* (2010; "Annette Bening Biography," 2016); John Krasinski, best known for playing Jim Halpert on the American version of the television sitcom, *The Office* (2005–2013; Mead, 2016); and Elijah Wood, best known for depicting Frodo Baggins in *The Lord of the Rings* movie trilogy (*The Fellowship of the Ring*, 2001; *The Two Towers*, 2002; *The Return of the King*, 2003; "Elijah Wood Biography," 2014). Given their average age, it was

expected that many participants would be familiar with John Krasinski and Elijah Wood because they likely grew up watching these actors in *The Office* and *The Lord of the Rings* series, respectively. Meanwhile, Annette Bening has maintained a steady output of appearances in well-regarded films, giving participants a number of opportunities to become familiar with her.

Participants heard the actors first introduce their stories and then read them aloud in their entirety. Each audio clip contained background music and sound effects to supplement the story as it was read. All participants heard each actor's voice but the order of presentation was randomized. Following each exposure, participants ranked the voice they heard on perceived pleasantness and completed PSI scale items, EPSI scale items, and transportation scale items. Due to the length of the audio clips, participants who spent less than 16.5 minutes completing the survey were excluded from the analysis. Additionally, due to the very small number of male participants, only responses from females were included in the analysis, leaving 108 participants ($M_{age} = 20.75$, $SD = 2.197$).

Measures

Pre-Test. Prior to exposure to the audio clips, participants rated their familiarity with and liking of 11 famous actors on a scale of 1 (*Completely unfamiliar/Do not like at all*) to 7 (*Very familiar/Like very much*). The three actors whose voices were featured in the audio clips appeared on the list of actors being rated.

Recognition. After listening to an audio clip, recognition of the speaker was assessed with an item that asked, "Did you recognize the voice that told the story?" If participants answered "yes" to this question they were asked to name the speaker.

Vocal Pleasantness. A single item asked participants to rate how pleasant they found the voice on a scale of 1 (*Very unpleasant*) to 7 (*Very pleasant*).

Positive PSI. The positive PSI scale was made up of 6 items taken from Rubin et al.'s (1985) 20-item PSI Scale. As noted earlier, Dibble et al. (2016) assert that many popular PSI measures assess both PSI and PSR, and in particular, that only a few of A. M. Rubin et al.'s PSI Scale items specifically measure PSI as conceptualized by Horton and Wohl (1956). To ensure that scale items were only measuring PSI, two independent coders rated whether items from two existing PSI measures—Auter and Palmgreen's (2000) multi-dimensional Audience-Persona Interaction Scale and A. M. Rubin et al.'s unidimensional PSI Scale—assessed PSI, PSR, or neither. Of the list of 28 items comprised by these two scales, 11 items were dropped before coding because they did not fit the context of this investigation, and therefore, may have confused participants. These items were eliminated either because they assumed the speaker provided personal perspectives and information when speaking or because

they anticipated an ongoing involvement with the speaker beyond the listening experience engaged in while completing the survey (i.e., “I have the same beliefs and attitudes as the speaker” and “I miss the speaker when I can’t listen to him or her”). This left 17 items from the PSI scales for the coders to rate.

The raters were both graduate assistants without prior knowledge of the theoretical concepts being investigated in this study. Prior to coding, both coders were provided with the definitions of PSI (“an illusory face-to-face interaction that takes place between a media user and a media figure during a discrete viewing or listening situation”) and PSR (“a one-sided relationship a media user forms with a media figure in which the media user considers the media figure outside of a discrete viewing or listening situation”) in writing and were given the opportunity to ask any questions they had about either concept.

The coders agreed on their assessment of 15 out of the 17 items. Only items that the raters agreed assessed PSI were utilized in this study. All other items were dropped, leaving six items from A. M. Rubin et al.’s PSI Scale ($\alpha = .832$). Item wording was adjusted to refer to the speaker of the audio clips. Example items include: “The speaker makes me feel comfortable, as if I am with friends” and “I sometimes make remarks to the speaker during the story.” Responses were recorded on a scale of 1 (I do not agree) to 5 (I totally agree). PSI items were added together to form a composite PSI score.

EPSI. EPSI was assessed with Hartman and Goldhoorn’s (2011) 6-item EPSI scale with the wording modified to reference the audio clip speakers ($\alpha = .916$). Example items include, “While listening to the speaker, I had the feeling that he/she knew I was there” and “While listening to the speaker, I had the feeling that he/she reacted to what I said or did” Responses were recorded on a scale from 1 (*Strongly disagree*) to 7 (*Strongly agree*) and items were added together to create a composite EPSI score.

Transportation. Transportation was measured using the Transportation Scale-Short Form (Appel, Gnambs, Richter, & Green, 2015). The scale consists of 5 items modified to reference the story read by the speaker in the audio clip ($\alpha = .887$). Example items include “I could picture myself in the scene of the events described in the story” and “The story affected me emotionally.” Responses were recorded on a scale from 1 (*Not at all*) to 7 (*Very much*). Items were added together to create a composite transportation score.

Data Analysis

Before exploring our hypotheses and research questions, we examined how many people recognized the voices of the three actors featured in the audio clips. Only 5 (4.7%) respondents reported recognizing Annette Bening’s voice. Consequently, analysis was limited to the voices of the other two actors, John Krasinski and Elijah Wood. Further, because the groups that recognized and did not recognize the actors’

voices were unequal and their distributions were non-normal, a Mann-Whitney U test was completed to examine if ratings of vocal pleasantness (H_1), positive PSI (H_2), EPSI (RQ_1), and transportation (RQ_3) significantly differed between individuals who recognized and did not recognize each of the two voices. A Pearson-product moment correlation was used to examine whether ratings of positive PSI (H_3), EPSI (RQ_2), and transportation (RQ_4) were positively and significantly correlated with ratings of vocal pleasantness.

Results

Description of the Data

For the remaining two actors whose voices were featured in the audio clips and utilized in our analysis, 21% recognized Elijah Wood and 32% recognized John Krasinski. We examined the results of the pre-test to investigate whether familiarity and liking differed between the group that reported recognizing the actors' voices after listening to the audio clips and the group that did not. A Mann-Whitney U test indicated that ratings of familiarity and liking for those who recognized John Krasinski's voice (familiarity: $n = 33$, $Mdn = 7$; liking: $n = 33$, $Mdn = 7$) and for those who did not (familiarity: $n = 70$, $Mdn = 1$; liking: $n = 64$, $Mdn = 4$) were significantly different, familiarity: $U = 153$, $z = -7.68$, $p < .001$, $r = -.8$; liking: $U = 176.5$, $z = -6.88$, $p < .001$, $r = -.67$, as were the ratings for familiarity and liking for those who recognized Elijah Wood's voice (familiarity: $n = 22$, $Mdn = 6$; liking: $n = 21$, $Mdn = 4$) and for those who did not (familiarity: $n = 79$, $Mdn = 2$; liking: $n = 76$, $Mdn = 4$), familiarity: $U = 336.5$, $z = -4.55$, $p < .001$, $r = -.45$; liking: $U = 433.5$, $z = -3.36$, $p = .001$, $r = -.34$. Thus, participants who reported recognizing the two actors' voices after listening to the audio clips also reported significantly more familiarity with and liking of the actors in the pre-test than those who did not recognize the actors' voices after listening to the audio clips.

Vocal Recognition and Pleasantness

As shown in **Figure 1**, a Mann-Whitney U test indicated that ratings of vocal pleasantness for those who recognized John Krasinski's voice ($n = 33$, $Mdn = 6$) and for those who did not ($n = 71$, $Mdn = 5$) were significantly different, $U = 707.5$, $z = -3.25$, $p < .001$, $r = -.35$. In addition, as shown in **Figure 2**, a Mann-Whitney U test indicated that vocal pleasantness ratings of Elijah Wood's voice were significantly different between those who recognized his voice ($n = 22$, $Mdn = 6$) and for those who did not ($n = 78$, mean $Mdn = 5$) $U = 592$, $z = -2.27$, $p = .02$, $r = -.23$. Thus, Hypothesis 1 was supported.

Figure 1
Box plots of vocal pleasantness ratings (1–7 scale) for those that recognized and did not recognize John Krasinski’s voice.

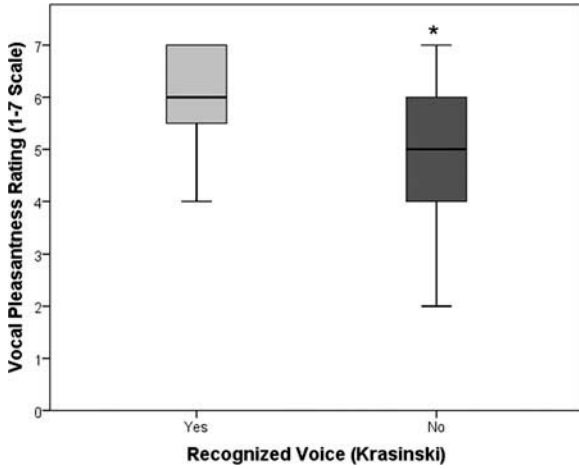
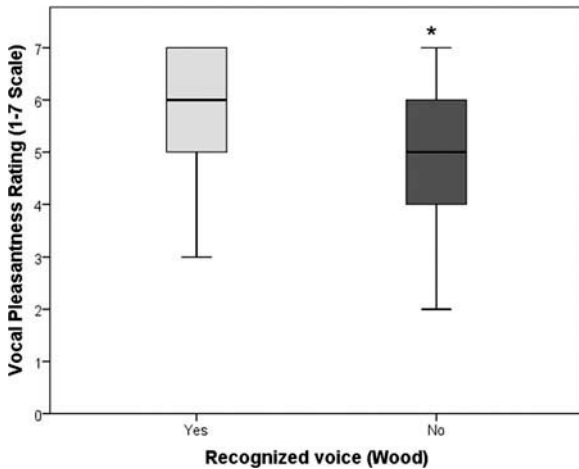


Figure 2
Box plots of vocal pleasantness ratings (1–7 scale) for those that recognized and did not recognize Elijah Wood’s voice.



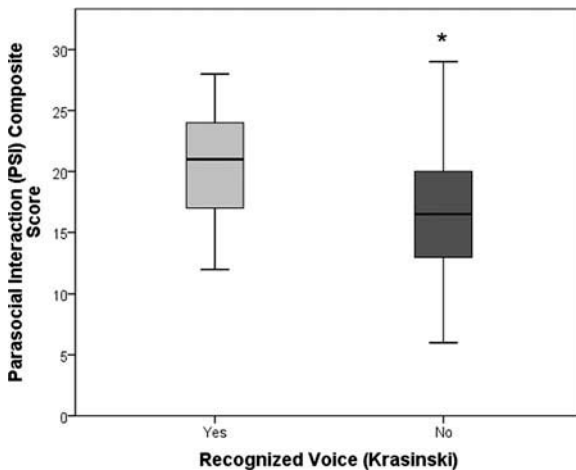
Vocal Recognition and Positive PSI

As shown in **Figure 3**, a Mann-Whitney U test indicated that PSI composite scores for those who recognized John Krasinski’s voice ($n = 33$, $Mdn = 21$) and for those who did not ($n = 71$, $Mdn = 17$) were significantly different, $U = 707.5$, $z = -3.25$, $p = .001$, $r = -.31$; whereas, **Figure 4** shows that PSI composite scores for those who recognized Elijah Wood’s voice ($n = 21$, $Mdn = 19$) and for those who did not ($n = 80$, $Mdn = 17.5$) were not significantly different, $U = 695.5$, $z = -1.21$, $p = .23$, $r = -.174$. Thus, H_2 was only partially supported.

Vocal Pleasantness and Positive PSI

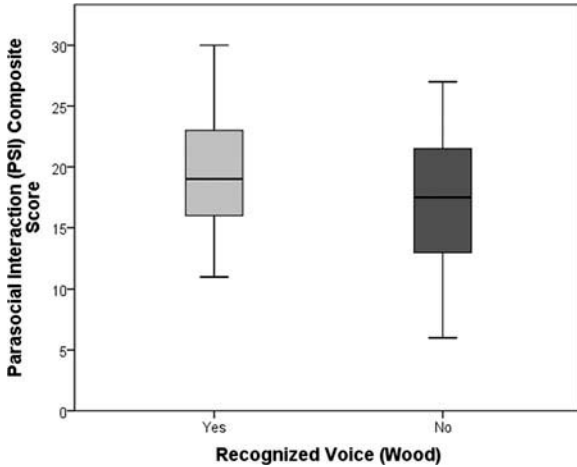
A Pearson’s product-moment correlation indicated that pleasantness ratings of John Krasinski’s voice were significantly and positively correlated with PSI composite scores $r(99) = .67$, $p < .001$, explaining 45% of the shared variance. A Pearson’s product-moment correlation indicated that pleasantness ratings of Elijah Wood’s voice were significantly and positively correlated with higher PSI composite scores $r(101) = .61$, $p < .001$, explaining 37% of the shared variance. Thus, H_3 was supported.

Figure 3
Box plots of PSI composite scores for those that recognized and did not recognize John Krasinski’s voice.



Downloaded by [Fielding Graduate University] at 17:22 22 September 2017

Figure 4
Box plots of PSI composite scores for those that recognized and did not recognize Elijah Wood’s voice.



Vocal Recognition, EPSI, and Transportation

We performed Mann-Whitney U tests to answer RQ₁ and RQ₃. Analysis indicated that EPSI composite scores for those who recognized John Krasinski’s voice ($n = 34$, $Mdn = 27$) and Elijah Wood’s voice ($n = 22$, $Mdn = 24$) and for those who did not (John Krasinski: $n = 72$, $Mdn = 23$; Elijah Wood: $n = 80$, $Mdn = 24$) were significantly different for John Krasinski, but not Elijah Wood (Krasinski: $U = 862$, $z = -2.45$, $p = .014$, $r = -.23$; Wood: $U = 801$, $z = -.64$, $p = .52$, $r = -.087$). Transportation composite scores for those who recognized John Krasinski’s voice ($n = 34$, $Mdn = 24.5$) and Elijah Wood’s voice ($n = 22$, $Mdn = 24.5$) and for those who did not (Krasinski: $n = 70$, $Mdn = 22$; Wood: $n = 79$, $Mdn = 22$) were not significantly different for either speaker (Krasinski: $U = 1057$, $z = -.92$, $p = .36$, $r = -.083$; Wood: $U = 802$, $z = -.55$, $p = .58$, $r = -.05$). Thus, similar to the PSI results, vocal recognition enhanced EPSI with John Krasinski’s voice, but not the voice of Elijah Wood. In addition, recognition of an actor’s voice did not enhance levels of transportation.

Vocal Pleasantness, EPSI and Transportation

To answer RQ₂ and RQ₄, a Pearson’s product-moment correlation indicated that pleasantness ratings of John Krasinski’s voice were significantly and positively correlated with higher EPSI composite scores $r(101) = .47$, $p < .001$ (explaining 22% of

the shared variance) and higher transportation composite scores $r(99) = .62$, $p < .001$ (explaining 38% of the shared variance). Likewise, a Pearson's product-moment correlation indicated that pleasantness ratings of Elijah Wood's voice were significantly and positively correlated with EPSI composite scores $r(102) = .24$, $p = .01$ (explaining 6% of the shared variance) and higher transportation composite scores $r(101) = .37$, $p < .001$ (explaining 14% of the shared variance). Thus, higher ratings of vocal pleasantness were correlated with higher levels of EPSI and transportation.

Discussion

To our knowledge, this is the first study to examine the role of vocal recognition in enhancing perceptions of vocal pleasantness and engagement during media use. Our findings provide preliminary evidence that both recognition of an actor's voice and perceiving a voice as pleasant can enhance different kinds of engagement with media. We found that participants who recognized two actors' voices rated each voice as significantly more pleasant than those who did not. In addition, participants who recognized John Krasinski's voice had significantly higher positive PSI and EPSI scores than those who did not. However, this was not the case for Elijah Wood's voice. The effect sizes for these findings were small to medium, indicating that recognition of a particular voice may play a role in enhancing perceptions of vocal pleasantness and positive PSI and EPSI. On the other hand, voice recognition did not increase participants' levels of transportation into the narratives they heard. Further, higher vocal pleasantness scores were strongly associated with higher positive PSI, EPSI, and higher transportation composite scores, indicating that perceptions of vocal pleasantness may enhance positive PSI, EPSI, and transportation, and vice versa.

Our results provide support for the idea that perceptions of vocal pleasantness, positive PSI, and EPSI may be greater for those who recognize media voices. Moreover, we found that perceived vocal pleasantness shows a strong predictive relationship with higher positive PSI, EPSI, and transportation scores. PSI as measured by Rubin et al.'s (1985) PSI scale has been found to positively influence attitude change (Tian & Hoffner, 2010). Likewise, transportation has been shown to increase a narrative's persuasiveness, leading those who experience greater transportation to adopt more beliefs in-line with the narrative (Green & Brock, 2000). Thus, our findings provide initial evidence that listeners' recognition of a voice and especially the perception that the voice is pleasant are an important consideration in the formulation of messages meant to facilitate engagement with media figures and narratives, as well as the attitude change that may result from such engagement.

Moreover, these findings suggest that future research on audience engagement with media voices should consider the impact of vocal recognition and vocal pleasantness on engagement processes. Brown (2015) proposes that perceptions of similarity with and liking a media persona lead to PSI, and that familiarity with the narrative being consumed and perceiving that narrative as realistic lead to

transportation. In contrast, our results indicate that recognition of a speaker's voice can result in PSI and EPSI and vocal pleasantness can result in PSI, EPSI, and transportation. Future investigations should explore whether the variables that influence audience engagement vary between different kinds of media. Specifically, research might examine if visual recognition of a media persona has a greater impact on audience engagement than vocal recognition of that persona, and if perceptions of vocal pleasantness impact engagement with audio media more than with audiovisual media.

In addition, the relationships we found between vocal recognition and positive PSI, as well as vocal recognition and EPSI, may indicate that those who recognized the actors' voices had a pre-existing PSR with the speakers. Interestingly, the pre-test scores of familiarity and liking differed significantly between the groups that did not recognize the actors' voices and the groups that did, such that those who recognized the speakers rated the actors as more familiar and more liked. These responses are potentially indicative of an existing PSR with the speaker. Thus, our results may point to the important role of PSRs in enhancing parasocial encounters with a media figure.

Further, past research has shown that EPSI is strongest when media figures are addressed bodily and verbally (Cummins & Cui, 2014; Hartman & Goldhoorn, 2011). However, in these studies, participants' past exposure to stimulus material was generally minimal, so few, if any participants, would have established PSRs with the media personae with whom they were presented. In contrast, Quintero Johnson and Patnoe-Woodley (2016) found that participants experienced EPSI with a favorite radio personality, a media persona with whom participants likely had a well-established, ongoing PSR. Our study lends support to the idea that PSRs may play an important role in enhancing parasocial experiences with recognized media figures during media use. Future research should continue to explore the distinctiveness of and connections between parasocial concepts. In particular, after participants listen to and complete items about celebrity voice stimuli, investigators might reveal the names of all media figures and collect data about participants' knowledge of and exposure to them. This would provide additional information on the existence and intensity of participants' PSRs with each celebrity, helping to further establish how PSRs may influence other parasocial processes.

This study had several limitations. First, participants who claimed to recognize the voices of the actors presented in the audio clips did not always correctly name the actor in question. Our analyses only took into account whether or not individuals believed they recognized the actor's voice, not the accuracy of that recognition. In future research, vocal pleasantness, PSI, EPSI, and transportation ratings should be compared across three groups: Participants who claim to recognize an actor's voice and correctly identify it; participants who claim to recognize an actor's voice but do not correctly identify it; and participants who do not claim to recognize an actor's voice. Comparison of these constructs across the three groups would provide insight into whether faulty voice recognition influences perceptions of vocal pleasantness and different kinds of narrative engagement in the same way as accurate recognition.

Second, the participants in our study were female university students in communication sciences and disorders courses. This homogeneity compromises the generalizability of our findings to the population at large. Furthermore, given the participants' area of study, they may have been more likely to actively engage with the featured voices than participants who were not academically focused on communication and voice. That being said, the majority of participants were recruited from introductory-level classes, and as a result, their knowledge of and attention to voices was unlikely to vary greatly from other students in their age range.

Moreover, participants took the survey in an uncontrolled environment via an electronic device of their choosing. As a result, it is impossible to know the volume or quality of the audio participants were exposed to while listening to the audio clips or if the environment in which participants listened to each clip influenced their ratings of vocal pleasantness, positive PSI, EPSI, and transportation. Future research could potentially address this confound by asking students to listen to samples in a laboratory environment. Investigators could then control the features of all audio clips and have listeners engage with them via the same audio device (i.e., computer, tablet) using speakers or headphones only.

In addition, our analyses only examined positive PSI, EPSI, transportation, and their relationship with vocal pleasantness and recognition across two male voices. It is possible that female listeners react to male speakers differently than would male listeners. In particular, females may react more positively to the voices of recognized male speakers versus recognized female speakers.

Likewise, the public personae of the male speakers, including their best-known roles and knowledge of their personal lives, may have impacted the responses of the female listeners who recognized their voices. John Krasinski is known for playing one half of a major romantic couple on *The Office* for nine seasons and for his marriage to Emily Blunt, a famous actress (Mead, 2016). Meanwhile, Elijah Wood is known for playing a hobbit, a diminutive fantasy figure, who lacked romantic attachments in *The Lord of the Rings* movies, and his personal life is not well-documented ("Elijah Wood Biography," 2014). Thus, the heterosexually romantic and relationship-oriented nature of Krasinski's public persona may have played a role in the higher levels of PSI and EPSI experienced by female participants who recognized him. This phenomenon was not replicated with Wood perhaps in part due to the less romantically oriented nature of his persona. Further research involving a greater number and variety of voices (i.e., those that are recognizable but compromised in quality, male and female voices, voices of male and female celebrities with various public personae, etc.) and evaluated by a more diverse group of participants should be pursued.

Further, each actor read a different story in the audio clips, and participants may have had varying degrees of familiarity with these stories. Brown (2015) posits that greater familiarity with a narrative may result in higher levels of transportation. Thus, participants' familiarity with *The Gingerbread Man*, the classic story read by John Krasinski, may have influenced their transportation into the story. However, although Elijah Wood read a less well-known story, *Me and My Cat*, our findings on transportation and its association with vocal recognition and pleasantness were similar for

both actors. Nonetheless, in order to better control for potential confounds, future research should employ recordings of speakers narrating the same content.

Finally, the sound effects and background music found within each recorded sample may have affected participants' ratings beyond the perception of each voice alone. We would argue, however, that although the inclusion of different stories with sound effects may compromise internal validity, it preserves ecological validity. In our media-saturated world, people frequently encounter audio-only media containing voices along with additional sounds that convey a wide range of verbal messages. As a result, we believe this study approximates how people encounter and interact with media voices in real life. On the other hand, this does not negate the need for future research that controls for such variables. One way to achieve this control would be to ask participants to listen to audio stimuli featuring media personae speaking and matched samples featuring non-media personae speaking (either including the same sound effects and background music in each sample or eliminating these additional variables completely). Investigators could then explore if participants' perceptions of vocal pleasantness, PSI, EPSI, and transportation varied between recognized media personae and unrecognized non-media personae. The results of such an investigation would further strengthen our understanding of how vocal recognition and vocal pleasantness impact engagement with audio media.

This study adds to the growing body of research that examines the way voice shapes our impressions of speakers and the messages they communicate. The human voice is an important, yet little studied, component of media messages. This study takes a first step towards understanding how vocal recognition and pleasantness impact media consumers' ability to engage with and immerse themselves in narratives. By casting celebrities to voice-only roles in radio and television commercials, animated films, video games, and audiobooks, media producers facilitate media consumers' ability to recognize the voices they hear. Our evidence suggests this recognition has the potential to enhance media users' parasocial experiences with a media voice and that if a voice is perceived as pleasant, PSI, EPSI, and transportation may be enhanced. Vocal recognition and pleasantness may increase the possibility that a listener will pay attention to a media message. Further, PSI, EPSI, and transportation may increase the likelihood that a listener will be persuaded by that message. Thus, these results indicate that voice has the potential to play an important role in our engagement with and reactions to media. Additional exploration of the impact of voice recognition and vocal pleasantness in the enhancement of media engagement represents a valuable avenue of continued research.

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