Reconceptualizing Address in Television Programming: The Effect of Address and Affective Empathy on Viewer Experience of Parasocial Interaction

R. Glenn Cummins & Boni Cui

College of Media & Communication, Texas Tech University, Lubbock, TX 79409, USA

Much scholarship has examined the parasocial bonds between audiences and media personalities. However, recent research differentiated between the development of parasocial relationships and the actual experience of parasocial interaction (EPSI) that can result from structural elements of a message such as style of address (Hartmann & Goldhoorn, 2011). This study presents an alternate conceptualization of style of address and employs an online assessment to examine its impact on the EPSI. Results indicated that bodily address, where the onscreen performer could be seen speaking to the viewer, fostered a stronger sense of interaction relative to verbal or no address. Moreover, emotional contagion, an affective component of empathy, likewise facilitated these perceived interactions, most strongly in response to bodily address.

doi:10.1111/jcom.12076

Viewer relationships with onscreen personae impact much of how we respond to media messages. As Cohen (2009) noted, “responses to characters, and relationships with them, are a central component of how people engage with media, process and understand media texts, react to them, and are affected by them” (p. 233). Much scholarship has explored these relationships under the umbrella of parasocial interaction (PSI, Giles, 2002). Horton and Wohl (1956) first defined the phenomenon as a “simulacrum of conversational give and take” (p. 215) where at-home spectators “consider that they are involved in a face-to-face exchange rather than in a passive observation” (p. 216). More than a half-century of scholarship has examined these perceived relationships and interactions (Giles, 2002), and PSI has been viewed as an antecedent to a variety of cognitive, affective, and behavioral outcomes (e.g., enjoyment, selective exposure, attitude change, social learning; Cohen, 2009; Giles, 2002; Klimmt, Hartmann, & Schramm, 2006; Papa et al., 2000; Schramm & Hartmann, 2008).

Corresponding author: R. Glenn Cummins; e-mail: glenn.cummins@ttu.edu
Despite this abundance of knowledge, scholars continue to gain new insights into this phenomenon. For example, observers recently posited that one shortcoming of the literature is a failure to distinguish between parasocial relationships (PSRs) and PSIs (Cohen, 2009; Klimmt et al., 2006; Schramm & Hartmann, 2008). For example, Perse and Rubin (1989) defined PSI as “a perceived interpersonal relationship on the part of a television viewer with a mass media persona” (p. 59). Whereas PSRs develop over time and exist beyond the viewing experience, the antecedent experience of a PSI refers to “the one-sided process of media person perception during media exposure” (Klimmt et al., 2006, p. 292). Recognition of this distinction places greater emphasis on the actual experience of PSI first proposed by Horton and Wohl (1956) as well as the variables that shape the perceived interaction. Likewise, it also contextualizes PSI as an in situ phenomenon that subsequently leads to various outcomes via a process model (Cohen, 2009; Giles, 2002; Klimmt et al., 2006).

On the basis of this distinction, Hartmann and Goldhoorn (2011) presented evidence that the experience of parasocial interaction (ESPI) varies as a function of message characteristics (i.e., form of address by the media figure) and individual difference in cognitive empathy (i.e., perspective taking). This study advances this vein of inquiry by addressing three limitations of that research. First, the authors’ conception and operationalization of address failed to fully reflect this technique within television programming. Second, posttest assessment of ESPI likewise failed to capture the dynamic nature of this perceived interaction as a corollary of continuous, shot-by-shot variation within a message. Third, their study examined only one component of empathy, cognitive perspective taking, although visual characteristics of contemporary media make affective empathy equally salient (Zillmann, 1991). Thus, this study employs online continuous response measurement (CRM) to examine the variably dynamic effect of addressing style and viewer empathy on the ESPI both during and after viewing.

**PSI and addressing style**

Despite Horton and Wohl’s (1956) original emphasis on the actual perception of interaction during message consumption, much subsequent research strayed from this conception and instead explored the cultivation of PSRs (Cohen, 2009). Couched within the uses and gratifications paradigm, surveys have examined PSRs as they develop over time and serve as a gratification that fuels media consumption (Babrow, 1987; Nabi, Stitt, Halford, & Finnerty, 2006; Perse & Rubin, 1989; Rubin & McHugh, 1987). Within this context, the most popular index of the phenomenon (i.e., PSI scale, Rubin, Perse, & Powell, 1985; Perse, 1990) is a measure that “primarily captures users’ friendships toward media performers, rather than users’ feeling of being involved in an interaction with the performer during media exposure” (Hartmann & Goldhoorn, 2011, p. 1105, italics added; Schramm & Hartmann, 2008). This emphasis on interaction, albeit illusory, returns to the conceptualization first proposed by Horton and Wohl (1956) as well as the forces that govern this illusion of face-to-face exchange—particularly those message properties controlled by the content producer.
One methodological alternative to these survey-based approaches is the use of experiments that link message characteristics to the creation of parasocial bonds, either the more durable relationships or the actual experience of a perceived interaction. For example, in their original examination of the PSI, Horton and Wohl (1956) referenced the use of “direct address,” where onscreen performers gaze directly into the camera as if speaking directly to the viewer at home, and they argued that this feature in particular helped cultivate parasocial bonds (p. 215). Furthermore, they asserted that viewers respond naturally to this technique despite its mediated nature.

The argument that viewers respond analogously in both social and mediated contexts has received considerable empirical support. Studies have demonstrated similarities between social and PSRs in terms of perception formation (Babrow, O’Keefe, Swanson, Meyers, & Murphy, 1988), relational development (Perse & Rubin, 1989), and relational dissolution (Eyal & Cohen, 2006). These parallels substantiate the argument that principles governing eye contact and gaze within interpersonal interaction may also operate in response to direct address. Eye contact serves a crucial role in regulating communication between social partners, including initial person perception (Macrae, Hood, Milne, Rowe, & Mason, 2002) and coordination of attention and information exchange (Bavelas, Coates, & Johnson, 2002; Burgoon, Coker, & Coker, 1986; Frischen, Bayliss, & Tipper, 2007; Kleinke, 1986). These principles of interpersonal communication also regulate exchanges between social actors in mediated environments (Bailenson, Blascovich, Beall, & Loomis, 2001; Yee, Bailenson, Urbanek, Chang, & Merget, 2007).

Given the power of gaze in interpersonal settings, the strategic use of address as well as other visual techniques could be employed “to foster in viewers an illusion of intimacy with the characters (or personae) of television programs” (Tsao, 1996, p. 89). For example, Meyrowitz’s (1986) notion of para-proxemics holds that formal features of mediated messages (e.g., visual framing) can recreate aspects of interpersonal communication exchanges such as closeness or intimacy between viewers and a character. Likewise, the thesis of one body of research has posited that on a preconscious level, media users fail to differentiate between real and mediated experience (Reeves & Nass, 1996). In summary, scholarship suggests that gaze initiated by a media performer should serve to cue attention, influence perception formation, and aid in the “simulacrum of conversational give and take” Horton and Wohl (1956) first described (p. 215).

Evidence has supported this argument by demonstrating links between address and parasocial bonds (Auter, 1992; Auter & Davis, 1991; Cummins & Bradford, 2005; Hartmann & Goldhoorn, 2011). For example, in one study participants viewed one of two versions of a comedy program, one of which contained scenes in which the central character spoke directly to the viewer, and a second where those scenes had been removed (Auter, 1992). Participants who viewed the program with address reported stronger parasocial bonds. However, this experimental manipulation suffers from the confounding of program content and presentation style of the performer.
As such, the study cannot determine if the increased PSR was generated by what a character said (i.e., verbally addressing the audience), how the character was shown (i.e., bodily addressing the audience), or both. Moreover, the study employed Rubin et al.’s (1985) post-test assessment of PSI, which fails to capture the experiential nature of perceived interactions (Schramm & Hartmann, 2008).

Similarly, a recent study by Hartmann and Goldhoorn (2011) employed factorial variation of addressing style to examine its impact on viewer response. The authors employed a novel post-viewing measure of the phenomenon, a tripartite EPSI scale. On the basis of principles derived from interpersonal communication, the EPSI scale gauges participants’ sense of mutual awareness and attention (i.e., the feeling that the onscreen personae is aware of and paying attention to the viewer, and that the feeling is reciprocal) and mutual adjustment (i.e., sense that the onscreen performer adjusts his or her behavior based on actions of the communication partner). In their study, addressing style of the performer was conceptualized along two dimensions: bodily address and verbal address. Both dimensions impacted EPSI, with the greatest sense of interaction resulting when the onscreen performer spoke directly to the camera using a speaking style that matched the audience (i.e., adult tone and wording versus child-like tone).

Reconceptualizing address

Granted, the internal validity of Hartmann and Goldhoorn’s (2011) design supports the cause and effect relationships they suggest. However, the benefit of these findings is hindered by the authors’ conceptualization and operationalization of addressing style as well as the posttest assessment of EPSI. Indeed, the authors acknowledge the artificial nature of their stimuli, noting that the content was produced by a nonprofessional camera operator and featured a performer who was not a trained TV presenter or actor. More importantly, their conception of bodily and verbal address does not fully reflect the varied use of these techniques in television programming. For example, their study operationalized bodily address in terms of the performer’s physical orientation to the viewer: either looking into the camera, or offscreen at a 90-degree angle, resulting in a poorly framed “ear shot” discouraged within video production and alien to viewers (Compesi, 2007, p. 197). Furthermore, their conception of verbal addressing referred to the style of speech employed and its fit with a particular viewing audience. This was operationalized by having the performer adjust wording and tone to match either an audience of adults (i.e., appropriate tone) or young children (i.e., inappropriate tone).

A more ecologically valid conceptualization and operationalization of address might feature shots where the onscreen performer speaks to the audience with the visual channel of the message continuously alternating between visual display of the performer speaking to the camera or an unseen interviewer just off camera (bodily address) or speaking to the viewer while the visual channel depicts other program events or “B-Roll” footage (verbal address). Interspersed among these may be additional shots where the character speaks to other onscreen personae while the
viewer is a mere spectator observing program events (*no address*). A key distinction between address, both bodily and verbal, and no address is the question of to whom a character is speaking. In her discussion of such instances of self-disclosure, Tsay (2007) posited a distinction between character-to-viewer exchanges and character-to-character exchanges. Within both bodily and verbal address, the performer (implicitly or explicitly) speaks to the viewer, providing personal insights into motivations, and often self-disclosing his or her state of mind about onscreen events (Hoffner & Cantor, 1991; Klimmt et al., 2006; Tsay, 2007). Within no address, characters speak to each other within the narrative or program (i.e., character-to-character exchange), transforming the viewer to a more traditional role of observer (Tsay, 2007).

This study reconceptualizes bodily address as instances where the viewer both sees and hears the mediated performer speaking to the viewer. Verbal address is reconceptualized here as instances where the performer implicitly (i.e., self discloses to the viewer) or explicitly addresses the audience (i.e., speaks to and engages the viewer using personal pronouns such as “you”), while the message’s visual channel contains footage of program events. In short, the audience hears the performer speaking to them but sees other related content. Finally, we reiterate that content producers continuously vary these dimensions in programming, frequently on a shot-by-shot basis, such that a scene may begin with bodily address and then alternate between bodily, verbal, and no address as the scene unfolds.

Because addressing style is variable throughout a message, a dynamic, online measure of audience response is needed to demonstrate relationships between alternating message characteristics and EPSI (Klimmt et al., 2006). As Cohen (2009) stated, “Producers work hard to engage audiences through production techniques that determine how text is constructed, how audience members are addressed, and how the characters are introduced. And yet, we know too little about what creates these relationships and how they develop and change” (p. 233). Thus, precise assessment of this change is needed. Parallels between interpersonal and mediated communication exchange suggest that the use of address—both bodily and verbal—should elicit a stronger sense of EPSI than the absence of address (*H1*).

Evidence also suggests differences in EPSI in response to bodily versus verbal address. As previously noted, insights from interpersonal communication suggest the power of eye contact or mutual gaze in controlling attention during communication exchanges (Frischen et al., 2007; Kleinke, 1986), and these principles are arguably at work in mediated contexts. Nonetheless, select characteristics of audiovisual presentations differentiate social and mediated exchanges (Hoffner & Cantor, 1991); chiefly, media messages can divorce the aural and visual channels of information within verbal address, where onscreen personalities speak to the viewer but the visual channel presents other events.

Within periods of address, onscreen persona “function as key to the comprehension of complex narrative and/or social structures” (Klimmt et al., 2006, p. 305). However, achieving this narrative function via verbal rather than bodily address transforms the performer from an (illusory) communication partner with the viewer to a
more distant narrator of events. Therefore, verbal address should produce a diminished sense of actual interaction with the performer compared to visual address ($H2$).

**Viewer empathy and addressing style**

Although studies have demonstrated the impact of visual address on viewer response, less is known about the individual characteristics that facilitate the experience of PSI with media performers. Surveys have demonstrated connections between individual characteristics and the more prolonged PSRs (e.g., loneliness, Rubin et al., 1985; gender and attractiveness, Hoffner, 1996). However, less evidence links viewer traits with specific program content or structural techniques. One characteristic that may shape interactions with performers—particularly in response to direct address—is empathy. Indeed, Hartmann and Goldhoorn (2011) demonstrated that one aspect of empathy, cognitive perspective taking, predicted EPSI. However, additional aspects of empathy also have potential to facilitate the perceived interaction between the viewer and onscreen personality.

Much research conceptualizes empathy as a multidimensional construct comprised of both cognitive and affective dimensions (Davis, 1996; Strayer, 1987; Zillmann, 1991). For example, in a test of two competing paradigms to explain the function of PSRs, Tsao (1996) adopted this cognitive/affective dichotomy and demonstrated correlations between both affective and cognitive empathy and PSI. Thus, the affective component of empathy may be salient during the experience of PSI. Klimmt et al. (2006) proposed that one such component is mood contagion, also known as *emotional contagion*. Tamborini, Stiff, and Heidel (1990) defined emotional contagion as individual difference in the “susceptibility to the emotions of those around one” (p. 618). This tendency to spontaneously adopt the emotions of others suggests that viewers high in this empathy trait may more easily experience PSI with onscreen characters, even without cognitive deliberation. Indeed, viewers often do not have ample opportunity to fully engage in such cognitive processes during viewing due to the persistence of onscreen events that demand attention (Zillmann, 1994).

The tendency to adopt the emotions of others has particular salience in the context of bodily address as a message characteristic deliberately employed to elicit empathetic response (Hoffner & Cantor, 1991). Zillmann (1991) noted that contemporary entertainment “thrives on the exhibition of human emotion” (p. 159), and he argued for the media’s ability to enhance viewer response to onscreen events via innate empathetic processes. Likewise, Tsao (1996) stipulated that researchers “should also take account of the extremely unrestrained depictions of human emotions on today’s high-iconicity media such as television” (p. 105). Graphic depictions of emotional expression as well as the causes leading to such displays represent another element that differentiates interpersonal from mediated communication exchanges, and such displays should trigger affective components of empathy. Research has long noted that facial expression can serve as a communicative act, particularly of emotions (Chovil, 1997; Ekman & Rosenberg, 1997). Moreover, individuals are more prone to mimicry of facial expression in communicative situations when a visual target is
present (Chovil, 1991) or when eye contact is made between communication partners (Bavelas, Black, Lemery, & Mullett, 1986).

In summary, witnessing a media performer’s affect via direct address—both bodily and verbal—may trigger empathetic processes that facilitate bonds between media performers and viewers. Regarding the cognitive component of empathy, those more likely to engage in perspective taking should experience greater PSI than those less likely to engage in this activity \( (H3) \). Furthermore, viewers who are more likely to adopt the feelings of others (i.e., higher in affective empathy) should also exhibit a more pronounced EPSI \( (H4) \). Finally, the contribution of these empathy traits to viewer EPSI should be intensified by the use of address and bodily address in particular \( (H5) \).

**Method**

**Participants**

A convenience sample of 154 participants was randomly assigned to view one of two versions of a reality-based television program that was edited to achieve variation in addressing style. Participants were students enrolled in communication courses at a large university in the Southwestern United States. A majority of the participants were female \( (n = 117, 76\%); \) male, \( n = 37, 24\% \). Participant age varied between 18 and 55 \( (M = 21.36, SD = 4.03) \). All of the students received extra credit or fulfillment of course research requirements for participating the study.

**Design and independent variables**

The study employed a 3 (style of address: bodily, verbal, or no address) \( \times \) 2 (control versus treatment) mixed-measures experimental design where style of address served as a within-subjects variable and assignment to control versus treatment served as a between-subjects variable. However, the design was not fully crossed (i.e., those in the control condition saw no forms of address). Analogous to previous research (i.e., Auter, 1992), participants in the control condition \( (n = 80) \) saw a version of the stimulus program where all uses of address were removed. Those in the treatment condition \( (n = 74) \) saw an identical program that employed four additional scenes containing alternating depictions of bodily, verbal, and no address (see Figure 1). Participants in both conditions completed a posttest measure of EPSI (EPSI scale). Participants in the treatment condition but not those in the control condition also completed an online continuous response measure of EPSI (EPSI CRM) during the four additional scenes.

This design facilitated between-subjects comparisons between the control and treatment groups, permitting a test of the global impact of address on viewer EPSI (scale) compared to the absence of address. Moreover, the design also allowed a within-subjects comparison to provide a more granular examination of differing address styles in the treatment group.

To manipulate style of address in the treatment condition, four segments were identified in the stimulus program where \( (A) \) the character intermittently spoke to the
Figure 1 EPSI (CRM) change scores in response to varied use of bodily, verbal, and no address within a 98-second scene. CRM = continuous response measurement; EPSI = experience of parasocial interaction.
viewer and (B), the visual channel alternately presented shots of bodily, verbal, or no address. Multiple segments were employed to operationalize address across multiple contexts and capture the diversity of audience response beyond a single scene. Within these segments, footage alternately depicted the target character speaking to the audience (bodily address), footage where the character spoke to the audience but the visual channel presented content referenced by the performer (verbal address), or program content where the character interacted with other onscreen personae and did not address the audience (no address; see Figure 1). Periods of verbal address largely consisted of implied interactions where the character self disclosed to the audience without directly engaging them in a faux conversation (e.g., “I’ve changed so much, I’m so different now.”). However, the stimuli also included more explicit address, where the viewer was made to feel a part of a communication exchange (e.g., “If you want to put me in the finale, that’s amazing.”) Duration of the control version was roughly 29 minutes long, and the treatment version was roughly 35 minutes long.

Two measures assessed individual differences in cognitive and affective empathy, which served as predictor variables. Self-report measures were paired with 11-point response scales anchored by 0 (Strongly Disagree) and 10 (Strongly Agree). The cognitive dimension, perspective taking \((M = 7.36, SD = 1.47)\), was selected from Davis’ (1983) interpersonal reactivity index. The perspective-taking scale measures one’s tendency to adopt the psychological point of view of others with five items \((\alpha = .79)\) such as, “I sometimes try to imagine my friends better by imagining how things look from their perspective.”

The affective dimension, emotional contagion \((M = 5.81, SD = 1.54)\), was assessed using a 7-item measure \((\alpha = .77)\) adopted from Stiff, Dillard, Somera, Kim, and Sleight (1988). The scale assesses one’s tendency to spontaneously adopt the emotions of others using items like, “I become nervous if others around me are nervous.”

**Stimuli**

The final episode from season seven of “The Biggest Loser” was employed as the stimulus. The program was broadcast on the NBC television network in spring of 2009. Thus, the age of the program helped inhibit memory effects. A majority of participants had not seen the episode \((n = 119, 77.3\%)\), and participants reported having seen an average of 6.3 episodes of the series overall \((SD = 12.5)\). The mean number of episodes viewed represents only 3% of the total number of episodes of the series aired to date \((N = 207)\), which minimized the impact of previous exposure. Of greater interest is the potential for systematic influence of previous exposure across experimental conditions. A chi-square test of independence found no relationship between the participants who indicated they had seen the episode before and assignment to the control versus treatment condition, \(\chi^2(1) = 2.59, p = .11, \Phi = .13\). Furthermore, an independent samples \(t\)-test revealed no difference in the mean number of episodes viewed for those in the control and treatment conditions, \(t(152) = .28, p = .78\). In summary, although previous exposure to the program could influence participants’ responses, exposure was minimal and balanced across
experimental conditions. Moreover, the within-subjects comparison also controls for previous exposure, as each participant acts as his or own control (Crano & Brewer, 2002), thereby preserving internal validity of tests of the experimental manipulation.

The program was selected because of its use of the various forms of address to the audience. The narrative in the stimulus focused on one central character, an 18-year-old male, Mike, who struggled with obesity, diet, and exercise. As such, the character potentially represented someone from the participants’ peer group, which could facilitate identification (Cohen, 2001, 2009). Moreover, use of a single character to which participants responded controls for idiosyncratic responses to varying characters.

**Dependent measures**

Viewers’ EPSI was operationalized in two forms. All study participants completed a posttest measure of the 6-item EPSI scale (Hartmann & Goldhoorn, 2011), which asks participants to indicate agreement with items like, “While watching the clip, I had the feeling that Mike was aware of me.” Although the authors state that EPSI gauges viewers’ sense of interaction along three dimensions (i.e., mutual awareness, attention, and adjustment), they noted that all responses loaded onto a single dimension, and they compiled responses into a mean index. Responses were highly consistent within this sample ($\alpha = .93$) and averaged to compute a single score ($M = 3.95$, $SD = 2.17$).

To capture the variably dynamic nature of EPSI, online assessment was conducted using CRM (Klimmt et al., 2006). Selection of a single response item represents a challenge to this form of measurement (Biocca, David, & West, 1994). Horton and Wohl’s (1956) original description of PSI explicitly referenced the imagined sense of being engaged in a communication exchange with an onscreen performer, although they also note that the experience is by necessity “not susceptible of mutual development” (p. 215). Therefore, the statement selected for use in the CRM task emphasized the sense that the onscreen performer was participating in such an exchange with the viewer.

Participants were asked via onscreen instructions to indicate agreement with the statement, “I feel as though Mike is talking to me.” To conduct the CRM assessment within the treatment condition, the stimulus was briefly paused prior to each target scene containing alternating shots of bodily, verbal, and no address. Participants used a computer mouse to continuously move a slider bar that appeared at the bottom of the stimulus to indicate their disagreement (0) or agreement (10) with the response statement. Responses were sampled at 1 Hz.

Participants viewed the stimuli at individual computer workstations using headphones. Stimuli and response scales were presented using MediaLab research software (Jarvis, 2012). Instructions on how to perform the task were provided orally at the start of the research session, as well as onscreen at the start of the experimental session. Furthermore, participants in the treatment condition were encouraged to practice the task in response to an unrelated video at the study’s onset.
Results

CRM data reduction
A series of steps were taken to process and reduce the CRM data (Biocca et al., 1994). Change scores were calculated from the initial value of 5, the scale’s midpoint, for each second of response data such that positive values indicated agreement with the item, and negative values indicated disagreement. Next, each second within the four target scenes was coded to reflect either bodily, verbal, or no address. Responses to each form of address were highly consistent (bodily address, $\alpha = .99$; verbal address, $\alpha = .96$; no address, $\alpha = .99$), and they were averaged to produce mean EPSI (CRM) change scores for bodily address, verbal address, and no address.

An additional challenge with CRM is demonstrating validity of the measure due to the use of a single response item (Biocca et al., 1994). As such, the online EPSI (CRM) measure could not capture all three aspects of the posttest EPSI (scale); however, recall that previous research suggested a single-factor solution (Hartmann & Goldhoorn, 2011). The EPSI (CRM) measure resonates most closely with the notion of mutual attention, as engaging the viewer in a conversational exchange implicitly denotes attention to a conversational partner (Kleinke, 1986).

Concurrent validity between the measures was demonstrated by calculating correlation coefficients between responses to the posttest ESPI (scale) and the online EPSI (CRM) separately for the three forms of address. Given the hypothesis predicting that bodily address would elicit the strongest EPSI, we should expect a high correlation between ESPI (CRM) during periods of bodily address and the posttest measure that gauged how much viewers felt engaged in such an interaction. Indeed, the correlation between the scale and CRM measures was greatest for bodily address, $r(72) = .39$, $p = .001$. The correlation for verbal address was lower but still significant, $r(72) = .34$, $p = .004$. As an indicator of discriminant validity, we should also expect that the EPSI CRM score during periods of no address, where viewers were not engaged by the central character, had no relationship with the posttest assessment of ESPI. No such correlation was observed, $r(72) = .09$, $p = .48$. In summary, correlations between ESPI (CRM) scores during periods of address and the posttest ESPI (scale) suggest that the two forms of measurement do have a positive relationship. Moreover, participants’ global EPSI (scale) exhibited no relationship with their experience of interaction when they merely observed onscreen characters interacting (i.e., periods of no address).

Effects of addressing style
Two analyses tested the first pair of hypotheses, one employing the full study sample and a second examining only those in the treatment condition. First, a one-way analysis of variance (ANOVA) was conducted where participant assignment to control versus treatment conditions served as the independent variable and the posttest EPSI (scale) served as the dependent measure. Results supported the hypothesis, $F(1, 152) = 10.60$, $p = .001$, $\eta^2_p = .07$, with participants in the treatment condition reporting significantly higher EPSI (scale) scores ($M = 4.52$, $SD = 2.31$) than those in the control condition ($M = 3.41$, $SD = 1.90$).
A second test that employed data only from those in the treatment condition was conducted to further examine H1 as well as H2. A repeated-measures ANOVA was conducted to compare participants’ EPSI (CRM) scores in response to bodily, verbal, and no address. The overall test statistic was significant, \( F(2, 150) = 8.20, p < .001, \eta^2_p = .10 \). With respect to H1, pairwise comparisons employing the Bonferroni correction for multiple comparisons revealed that EPSI (CRM) scores were significantly higher in response to bodily address (\( M = .98, SD = 1.37 \)) relative to verbal (\( M = .47, SD = 1.26 \)) and no address (\( M = .41, SD = 1.89 \)). However, no difference emerged between verbal and no address. Thus, H1 was only partially supported via the first comparison of EPSI (scale) scores between the treatment and control groups. As the comparison employing EPSI (CRM) scores revealed, only bodily address yielded greater scores than no address. With respect to H2, the pairwise difference between bodily and verbal address supports the prediction that verbal address would elicit diminished EPSI relative to bodily address.

**Impact of cognitive and affective empathy on EPSI**

The final three hypotheses examined the relationship between empathy traits and EPSI. Hierarchical regression was employed to examine the impact of the two empathy variables on the posttest EPSI (scale) using the full study sample. To test H3 and H4, perspective taking and emotional contagion were entered as predictors in the first block. To test H5, interaction terms were calculated between each of the empathy variables and the experimental treatment, dummy coded as control = 0 and treatment = 1. These interactions were then entered into block 2 of the regression. Regarding H3 and H4, the regression equation for model 1, which included only the two empathy variables as predictors, was significant, \( F(2, 151) = 13.12, p < .001, R^2 = .15 \). However, results failed to find a relationship between perspective taking and EPSI (scale) (\( B = .14, \beta = .09, p = .23 \)), and H3 was not supported. The regression coefficient for emotional contagion (H4) was significant (\( B = .54, \beta = .24, p < .001 \)). Regarding H5, the second regression model, which also included the interaction terms as predictors, was likewise significant, \( F(4, 149) = 10.01, p < .001, R^2 = .21 \), as was the change in variance accounted for \( \Delta R^2 = .06, F(2, 149) = 6.03, p = .003 \). However, the interaction terms failed to reach statistical significance (Perspective Taking × Condition, \( B = -.10, \beta = -.16, p = .48 \); Emotional Contagion × Condition, \( B = .29, \beta = .16, p = .07 \)) and did not support the prediction that the contribution of empathy to viewer EPSI was moderated by the use of address.

To examine the relationship between the empathy traits and specific forms of address, a series of linear regressions were performed to examine the relative contribution of perspective taking and emotional contagion on EPSI (CRM) scores in response to bodily, verbal, and no address. As seen in Table 1, perspective taking failed to predict EPSI (CRM) scores during periods of bodily, verbal, or no address, which again fails to support H3. In contrast, emotional contagion served as a significant predictor of EPSI (CRM) in response to bodily address (\( \beta = .34, p = .003 \),
and a weaker but marginally significant predictor response to verbal address ($\beta = .23, p = .05$). The test found no relationship between emotional contagion and EPSI (CRM) during periods of no address ($\beta = .06, p = .62$). This varying contribution of emotional contagion in response to bodily, verbal, and no address suggests that the relationship between affective empathy and EPSI is dependent upon specific addressing style. Thus, H5 was partially supported.

**Discussion**

**Style of address and viewer response**

As with past research, results showed the utility of having onscreen performers speak to the audience as a means of facilitating an “illusion of intimacy” (Horton & Wohl, 1956, p. 217). However, by employing an online assessment and affecting variation in address that bears greater resemblance to its application in genuine television programming, this study illuminated variance in this perceived interaction throughout message consumption. Furthermore, the alternate conception of verbal address tendered here, where viewers were verbally engaged by an onscreen persona without being seen, also sheds light on the subtle differences in addressing style.

Mutual gaze plays a powerful role in regulation of interpersonal exchanges (Burgoon et al., 1986; Goffman, 1963; Kleinke, 1986), and mediated mutual gaze via bodily address was equally powerful in fostering the perception of being engaged in a communication exchange with the onscreen performer. Participants reported a significantly stronger sense of interaction when the onscreen character both spoke to them as well as made eye contact. Although at first blush this seems to merely replicate previous findings (Hartmann & Goldhoorn, 2011), one must recall the competing operationalization of address employed here that is arguably more characteristic of television programming.

The diminished sense of EPSI during periods of verbal address relative to bodily address has theoretical and practical applications. If a message producer’s explicit goal is to facilitate or elicit a viewer’s sense of interaction with media performers via production elements (Cohen, 2009; Tsao, 1996), then bodily address is a privileged technique relative to verbal or no address. Participants failed to recognize verbal
address as a form of interaction with the performer, as the online measure of EPSI was equally low in response to verbal and no address. This suggests that within verbal address, the onscreen personality serves as a narrator of sorts, chronicling what is being seen, but not necessarily in a way that engages the viewer in a pseudocommunication exchange. That being said, it is worthwhile to observe that differences could still emerge between more implicit versus explicit forms of verbal address. For example, onscreen personae may simply speak to the viewer and describe events (i.e., implicit address), or they may speak to the viewer in a more personal tone and engage the audience in a one-way illusory interaction (i.e., explicit address). Indeed, Horton and Wohl (1956) described such techniques in their seminal treatise on PSI, and subsequent studies have discussed explicit exchanges with the viewer (Tamborini & Zillmann, 1985). Future research could employ more controlled variance to examine differences in EPSI that emerge as a function of variance in verbal address.

Affective empathy and visual address
As previously noted, scarce evidence links message elements and individual characteristics in the creation of PSI. If one broadly conceives empathy as a phenomenon that governs how individuals respond to the emotions of others, then evidence consistently suggests a positive relationship between empathy and the sense of interaction with onscreen personae. Viewers predisposed to adopt the feelings of others (i.e., affective empathy) reported a stronger sense of interacting with characters onscreen, and this relationship was strongest when the onscreen performer was both seen and heard via bodily address. Given the content properties of what is often disclosed during periods of direct address, where viewers often witness graphic displays of emotion by the onscreen character, then this relationship is intuitive (Tsay, 2007). Logic suggests that viewers susceptible to emotional contagion should respond strongly to such displays (Hoffner & Cantor, 1991), and these findings corroborate that logic.

However, results failed to support the prediction that cognitive perspective taking facilitates EPSI. Trivial post hoc explanations can be offered to explain the lack of a relationship between cognitive empathy and EPSI, such as idiosyncrasies of sample, context, and stimuli. A more meaningful potential cause of this failure may be the study design. Completion of the online CRM task during periods of address could occupy cognitive resources and inhibit the automatic mind reading characteristic of cognitive empathy (Hartmann & Goldhoorn, 2011). This possibility remains an empirical question.

Theoretical implications of addressing style
What has been absent from this discussion is any consideration of why content producers would desire to employ address to create this faux interaction. Tsao (1996) asserted that message producers “employ many technical devices such as conversational styles, camera angles, and studio audiences to foster in viewers an illusion of intimacy with the characters (or personae) of television programs” (p. 89). As such, the skilled and deliberate use of address could facilitate desired outcomes.
One obvious motivation is the commercial interests that govern efforts to strengthen bonds between onscreen personalities and viewers (i.e., audience loyalty, increased viewership) (Russell, Norman, & Heckler, 2004). However, other motivations have more prosocial merit.

Although PSI may be studied as an outcome of the viewing experience, an alternate view is that EPSI may also mediate subsequent outcomes, working to either strengthen or inhibit other effects (Cohen, 2009). Again, emphasis on the distinction between PSI and PSR highlights areas where further exploration of EPSI may advance extant knowledge surrounding PSRs. Scholars have argued that EPSI during message consumption may be an initial step in the subsequent development of various phenomena such as enduring PSRs, greater engagement with a character or narrative, selective exposure, attitude change, and knowledge acquisition (Giles, 2002; Klimmt et al., 2006). Research within the entertainment-education model of attitude change describes how PSRs between media audiences and performers can lead to individual behavioral change via social learning and increased self-efficacy as audiences attend to characters and learn from them (Papa et al., 2000). Furthermore, PSRs extend into viewers’ social lives as well via conversations with others about media personae, which can intensify intended effects (Giles, 2002; Papa et al., 2000). Research exploring the parasocial contact hypothesis also demonstrates the far-reaching influence of PSRs, as relations with onscreen characters can influence behaviors and attitudes to others in nonmediated contexts (Schiappa, Gregg, & Hewes, 2006). Additional inquiry is needed to explore how ESPI may work as an antecedent of the PSRs that contribute to or mediate these outcomes.

Other studies have explicitly employed PSRs within mediation models of message effects. For example, Brown and Basil (1995) demonstrated how parasocial bonds with Magic Johnson intensified the relationship between media exposure and individual concerns surrounding HIV and intention to reduce risky sexual behaviors. Recent studies have also demonstrated the importance of viewer relationships with onscreen characters and their influence on the effective introduction of health-related messages in entertainment content (Moyer-Gusé, Chung, & Jain, 2011; Moyer-Gusé & Nabi, 2010; Murphy, Frank, Morgan, & Patnoe-Woodley, 2011). On the basis of the findings presented here, strategic use of bodily address to elicit EPSI during message consumption can fuel these subsequent outcomes, and holistic models of media influence could integrate style of address as a causal variable within such models.

Finally, an additional means of extending this research regarding addressing style is to explore its impact on initial perception of or dispositions toward onscreen characters (Hoffner & Cantor, 1991). Scholars have employed a variety of techniques to explore how viewers make judgments of media characters (e.g., Livingstone, 1987; Reeves & Greenberg, 1977). Nonetheless, controlled study of how production techniques influence such judgments has been given short shrift. To wit, Raney (2003) said “[d]isposition theories do not address formal features of a presentation that may impact enjoyment (e.g., camera movements, sound effects,
music)” (p. 80). Clearly, addressing style could be included among these various formal features.

Limitations and suggestions for future research

Despite the value of the findings presented herein, limitations of the study design and sample require that results be interpreted with caution. First, the sample of undergraduate students studying communication raises concerns over the generalizability of results to other populations (Sears, 1986). An obvious solution to this limitation is replication with a different sample to test the robustness of observed effects. However, use of a convenience sample does not necessarily invalidate the causal relations demonstrated here as a function of varying styles of address, as one should expect to see the hypothesized effects across differing populations (e.g., Mook, 1983).

A second limitation is the potential influence of preexisting feelings or familiarity with the stimulus program, as knowledge of the target character could influence EPSI (e.g., Rubin & McHugh, 1987). However, the majority of participants reported that they had not seen the selected episode, nor were they avid viewers of the series. Most importantly, the nature of the design controlled for this potential contaminant, as prior exposure was balanced across experimental conditions via random assignment. Furthermore, within-subjects analysis likewise controls for such individual differences (Crano & Brewer, 2002).

One final limitation is the use of a self-report measure to gauge EPSI, as well as the limitations of a CRM measure. Regarding the validity of the CRM measure, the correlations reported between EPSI (CRM) and EPSI (scale) scores are somewhat problematic. Ideally, assessment of the ESP (scale) should occur after specific forms of address rather than after program consumption, as the postexposure assessment only provides a global sense of how much the viewer felt engaged by the target character. However, the continually dynamic use of varying forms of address makes such pure assessments problematic, as program content often quickly alternates between these forms.

More broadly, better understanding of EPSI may be gained through techniques other than self-report. To the extent that PSI is an experiential phenomenon subject to conscious perception, then the use of self-report remains valid. However, alternate measurement techniques could provide insight into cognitive processes that may escape conscious awareness but nonetheless are key to the creation of these experiences (Klimmt et al., 2006). For example, alternate measures such as psychophysiological indices or secondary-task response times could be employed to demonstrate differences in attention to onscreen personae as a function of addressing style (Lang, Bradley, Park, Shin, & Chung, 2006; Ravaja, 2004). Although measurement of attention does not capture EPSI, attention allocation is clearly related to the creation of the phenomenon. Online measures of EPSI in addition to the one advanced here can be used to empirically demonstrate relationships between these illusory interactions and salient post viewing outcomes.
References


Reconceptualizing Address

R. G. Cummins & B. Cui


