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“And That’s a Fact!”: The Roles of Political Ideology, PSRs, and Perceived Source Credibility in Estimating Factual Content in Partisan News

Kristen D. Landreville and Cassie Niles

Cable news schedule today is programed with a transition between objective reporting and subjective commentary. With this in mind, we address the question: to what extent does political ideology impact one’s estimation of factual content in the monologue of a partisan news host? Going beyond direct effects, we analyze two moderated mediation models, using news host as moderator and using parasocial relationship and source credibility as parallel mediators. Results show like-minded partisanship with a news host led to higher estimates of factual content, and this effect worked indirectly through credibility perceptions. Additionally, this process occurred more intensely for conservatives.

The distinction between news content and opinion content in mass media has become more and more blurred, especially since the rise of cable news. Cable news hosts, such as Chris Matthews, Rachel Maddow, Tucker Carlson, and Sean Hannity, often switch from providing news summaries to offering partisan commentary. Scholars, among others, assert that the increase in partisan news and reliance on cable news hosts for information is problematic for democracy because, in part, it encourages outlet-favored misperceptions, despite knowing the evidence (Garrett, Weeks, & Neo, 2016). Partisan news viewers are encouraged to disparage and scorn experts, facts, and evidence by way of questioning their credibility and legitimacy (Garrett et al., 2016). This suggests that if a viewer is aware of the existing evidence and that the existing evidence contradicts their own beliefs, the influence of partisan news supersedes the influence of facts and evidence in the viewer beliefs (Garrett et al., 2016). Again, this is challenging for democracy because basic facts and evidence, as well as the trustworthiness and dependability of experts, are being debated.

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Furthermore, the frequent and fluid transitions from fact to opinion by cable news hosts may encourage obfuscation of facts and opinions among viewers, especially among partisans. Political partisans tend to engage in biased information processing such that the likelihood of derogating an opinionated news source (e.g., Feldman, 2011), neutral news sources (e.g., Gunther, Edgerly, Akin, & Broesch, 2012), and even fact-checking news sources (e.g., Nyhan & Reifler, 2010) increases with partisanship. Partisanship shapes the processing and interpretation of a myriad of messages beyond traditional and opinionated news as well, from political satire (e.g., LaMarre, Landreville, & Beam, 2009) to educational science communication (e.g., Nisbet, Cooper, & Garrett, 2015). Explanations such as motivated reasoning (Kunda, 1990) and the belief gap hypothesis (Hindman, 2009) help researchers understand the media reactions and behaviors of partisan audiences. Essentially, these explanations attempt to provide insight into how highly-partisan audience members can interpret news and information so differently from those who are less partisan.

In our study, we are interested in this same phenomenon, with the criterion variable being one's estimation of the amount of factual content in the monologue of a partisan news host. In brief, we seek to understand if political ideology impacts estimation of factual content in a partisan news host's monologue. Using a moderated mediation approach, we test two parallel indirect paths through which this connection may occur: parasocial relationships and perceived source credibility.

Partisanship and Biased Information Processing

A fact is a verifiable piece of evidence in objective reality (Merriam-Webster, 2018a) that is not distorted by personal feelings, prejudices, and interpretations; an opinion is a view, judgment, appraisal, or subjective evaluation formed in the mind (Merriam-Webster, 2018b). Even though the definitions of a fact and an opinion appear to be simple, there are scholarly divisions about objectivity, subjectivity, and what is know-able (ontology) and how we come to know the world (epistemology) (McQueen & McQueen, 2010). For example, Berger (2016) noted that key philosophers like Friedrich Nietzsche believed that we cannot establish any fact in itself, rather we can only know perspectives. Alternatively, positivism and post-positivism assumes that an objective reality exists, facts exist independent of social actors, and that we can study this objective reality and facts using the scientific method (Wench, Thomas-Maddox, Peck Richmond, & McCroskey, 2016).

While we maintain there are merits to all academic approaches, the current study takes a positivist/post-positivist, social-scientific approach. Even so, there are still disputes about basic facts, especially in politics and along partisan lines (Hindman, 2009). In fact, the belief gap hypothesis proposes that partisanship is a better predictor of politically disputed beliefs and knowledge than education level (Hindman, 2009, 2012). For example, climate change (Hindman, 2009), the safety

of vaccinations (Veenstra, Hossain, & Lyons, 2014), and the failures of abstinence-only sex education (Hindman & Yan, 2015) may yield consensus in the respective scientific communities but yield belief gaps among partisans. Furthermore, partisanship and partisan news use can serve as indirect predictors of the belief gaps among the news audience as well (Diercks & Landreville, 2017).

Motivated reasoning, or the tendency for partisans to interpret information in a biased manner that reinforces their predispositions (Kunda, 1990), is also a contributing factor when processing politicized topics that range from the credibility of public opinion polls (Kuru, Pasek, & Traugott, 2017) to emergent technologies (Druckman & Bolsen, 2011) and climate change (Hart & Nisbet, 2012). In short, partisan identity cues and motivated reasoning influence how we evaluate facts. Recent Pew (2018) data show that both Republicans and Democrats were more likely to label both factual and opinion statements as factual, when they appealed more to their respective political beliefs. Here, we are particularly interested in the extent to which partisan identity influences the *estimation* of the amount of factual content in a partisan news host's monologue.

H₁: Like-minded partisanship with a partisan news host will encourage individuals to estimate more factual content in the news host's monologue.

Cable News Networks and Partisanship

It is not a secret that cable news networks tend to identify with a particular political ideology (Perloff, 2014). About two decades ago, when more cable news networks began to appear, the competition between them also started to intensify. Adding more news platforms to the media environment provided people with more news coverage than ever before, giving them the opportunity to seek out the type of programming with which their preexisting beliefs are aligned the most (Iyengar, Sood, & Lelkes, 2012; Stroud, 2011). Specifically forced competition between news networks allowed these networks to find a target viewership that they could call their own, which meant defining the news organization within a particular partisan framework (Hmielowski, Beam, & Hutchens, 2015). In addition, as cable news became more partisan and polarized, heavy TV viewers also became more partisan and polarized (Hmielowski et al., 2015).

Parasocial Relationships with Partisans News Hosts

One way that a news network can convey its partisan preference is through its news hosts. News hosts play a pivotal role in the branding and marketing of the network, all in the effort to attract viewers; cable news networks have been more

successful in using news hosts for “production” differentiation purposes (Chan-Olmsted & Cha, 2008). Some viewers may even form a parasocial relationship (PSR) with a news host. PSRs are a one-sided relationship, or interpersonal involvement, that media consumers voluntarily establish with media characters (Horton & Wohl, 1956; Rubin, Perse, & Powell, 1985). PSRs comprise cognitive, emotional, and/or behavioral reaction processes toward the media character (Klimmt, Hartmann, & Schramm, 2006). Social attraction (e.g., attraction as social or work partners) encourages PSRs, which then leads to increased perceptions of PSR importance (Rubin & McHugh, 1987). Interpersonal involvement with a media character can include seeking guidance from the media character, seeing the media character as a friend, and even predicting accurately the feelings and attitudes of the media character (Perse & Rubin, 1989; Rubin et al., 1985). This PSR development process follows a similar process to non-mediated relationship development (Rubin & McHugh, 1987).

It is important to differentiate a PSR from a parasocial interaction (PSI), for early literature on parasocial research in diverse fields did not always distinguish the two concepts. A PSI represents the “one-sided process of media person perception during the media exposure,” (Klimmt et al., 2006, p. 292); it has also been conceptualized as a “viewer’s sense of mutual awareness, attention, and adjustment to a media performer that occurs during viewing” (Dibble, Hartmann, & Rosaen, 2016, p. 41). A PSR is the “cross-situational relationship that a viewer or user holds to a media person” (Klimmt et al., 2006, p. 292). Essentially, the difference is one of situational. While PSI describes an immediate psychological interaction during media exposure, PSR reflects a long-term, stable relationship with a media character that develops from repeated exposure and when individuals are engaging with the media character outside of the media exposure (Schmid & Klimmt, 2011). PSRs are a significant factor in media users’ decision-making about selective media exposure; users are attracted to media characters who provide a positive emotional atmosphere (Klimmt et al., 2006).

For the current study, we focus on PSRs. We argue that viewers who share a political ideology with a partisan news host will be more likely to develop a PSR with the host. To help explain, we turn to research in political discussion. Specifically, individuals prefer to talk with like-minded others, are generally well-equipped at identifying who agrees with them, and control their political discussion environment through selective exposure (Huckfeldt, Johnson, & Sprague, 2002; Huckfeldt, Mendez, & Osborn, 2004). Thus, a like-minded viewer may feel social attraction to a partisan news host who, not only shares a political ideology, but is also an authority and opinion leader in that respective political ideology (i.e., a task, or competency, attraction).

Viewers may learn that selectively exposing themselves to like-minded news hosts reinforces their preexisting beliefs and affirms their political ideology. Likewise, as viewers gain confidence in predicting the news host’s attitudes, feelings, and behavior (i.e., attributional confidence), the likelihood of a PSR may increase (Perse & Rubin, 1989).

While PSRs can have a positive or negative valence (Schramm & Hartmann, 2008), we are interested in the potential of a positive PSR developing when an individual shares the partisanship of a partisan news host. Going further, we suspect that a PSR with a like-minded news host may mediate the relationship between partisanship and estimation of factual content in a news host's monologue.

H₂: Like-minded partisanship associated with a partisan news host will encourage individuals to possess stronger PSRs with the partisan news host.

H₃: PSRs with a like-minded partisan news host will mediate the relationship between individuals' political ideology and estimation of factual content in a partisan news host's monologue.

Perceived Source Credibility

An additional parallel mediator in the relationship between partisanship and estimation of factual content may be perceived source credibility of the partisan news host. The concept of source credibility is a mediator of interest because it is important to evaluate the specific news host who is presenting the cable news monologue. Source credibility is conceptualized as audience perceptions of the speaker's competence (or expertise), trustworthiness, and goodwill (McCrosky & Teven, 1999). Competence is defined as someone with qualification, expertness, intelligence, and authoritativeness. Trustworthiness is the perception of someone who has character, safety, and honesty. Finally, goodwill is one's level of caring for another and the perception of general concern for another person's best interests (McCrosky & Teven, 1999). All three of these concepts are important when assessing news host credibility.

Credible news sources typically have a reputation for providing accurate and truthful reporting, according to Fragale and Heath, (2004). Their research also show that people assume their own beliefs are true and those true beliefs come from credible sources. In other words, individuals assume that statements they believe to be true and factual come from credible sources. Therefore, we expect that individuals who assign higher credibility ratings to a partisan news host will estimate the host's monologue to be more factually accurate because it is more likely they perceive more truth and resonated beliefs in the monologue. Relatedly, when individuals judge a source to possess more credibility, individuals afford the source higher evaluations of trust and competency (Perloff, 2018). Also relevant to the appeal of partisan news hosts is the style of delivery, for there is evidence that sources who exude more confidence in their judgments can be more persuasive, even when the source's comments are factually incorrect (Perloff, 2018; Zarnoth & Sniezek, 1997). Take together, this literature suggests that individuals who perceive higher perceived source

credibility in the news host will estimate more factual information delivered by that news host.

Cable news hosts play a pivotal role in the branding and marketing of the network, and there is evidence that regular viewers of cable news hosts have different perceptions about news media credibility. For example, nine-in-ten regular Hannity (Fox News) viewers reported they see a lot of bias in news coverage in general, while close to seven-in-ten (69%) regular viewers of Chris Matthews' MSNBC show offered the same evaluation as well (Pew, 2011). Thus, if these regular viewers are skeptical about general news media bias, then they are potentially watching the shows anchored by these partisan news hosts because they anticipate acquiring factually accurate information from these news hosts. We argue that higher levels of perceived source credibility will arise with like-minded news hosts and positively influence the amount of factual content that an individual estimates the statements provided by that source (i.e., a monologue by the partisan news host).

H₄: Like-minded partisanship associated with a partisan news host will encourage individuals to possess stronger source credibility perceptions with the news host.

H₅: Stronger source credibility perceptions with a like-minded partisan news host will mediate the relationship between individuals' political ideology and estimation of factual content in a partisan news host's monologue.

Putting together the various relationships outlined above, we examine a moderated-mediation model with two parallel mediators. Figure 1 shows the proposed process.

Method

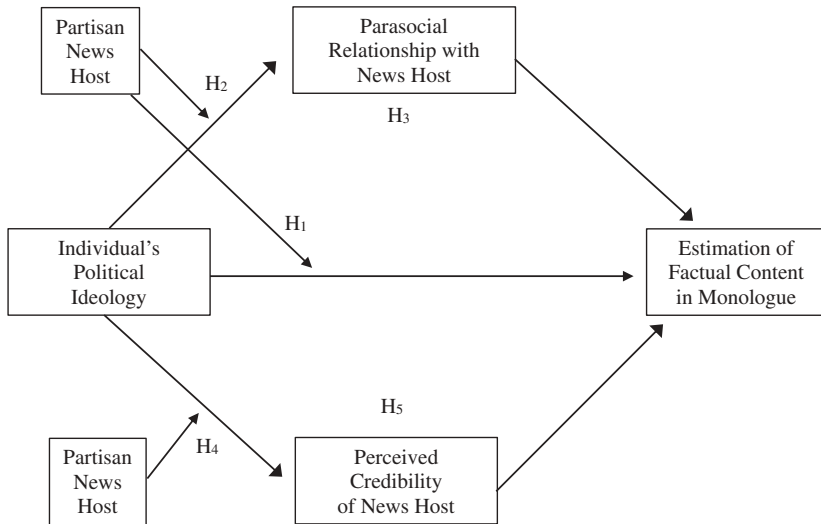
To test the hypotheses of the study, an online experiment was conducted using a 2 (partisan news host political ideology: conservative or liberal) x 2 (monologue topic: insider trading or national debt) experimental design. Two control groups were also included in the study design.

Participants

This study included 162 total participants recruited through Mechanical Turk (MTurk), who took the survey on the Qualtrics survey platform. Prior research shows that MTurk provides data that is similar to a sample of college students and is often more generalizable (Buhrmester, Kwang, & Gosling, 2011). Each

Figure 1

This Figure Shows the Proposed Moderated Mediation Process Using Model 8 with an Additional Parallel Mediator in the SPSS Process Macro (Hayes, 2013). H_3 and H_5 Represent the Hypotheses Relevant to the Moderated Mediation Predictions



participant received 75 cents for their participation. The average time that participants took to complete the study was 9 minutes and 45 seconds.

Of the 162 participants, eighty-one (50%) were female, and eighty-one (50%) were male. The mean age was 38.7 years ($SD = 12.1$ years). One hundred and thirty-two (81.5%) reported their race as white or Caucasian, fifteen (9.3%) as black or African American, eight (4.9%) as Asian, one (.6%) as American Indian, 5 (3.1%) reported multiple races, and one did not respond. In terms of political party affiliation, sixty-three (38.9%) participants reported that they affiliate with the Democratic Party, forty-six (28.4%) mentioned Republican, forty-seven indicated (29%) as Independent, five (3.1%) identified as Other, and one did not respond. The average annual income was between the categories of “\$25,000 to \$49,999” and “\$50,000 to \$74,999.”

Analyses of variance were used to determine if random assignment among conditions in Qualtrics functioned properly. Indeed, there were no significant differences among any of the conditions on age, gender, income, race, political party affiliation, frequency of consuming cable news content, and perceptions of credibility of cable news content (i.e., Fox News, CNN, and MSNBC).

Procedures

Once participants checked a box on the online survey that acknowledges their informed consent, the participants were randomly assigned to one of four conditions. Condition 1 contains an insider trading monologue attributed to Chris Matthews, the liberal host from MSNBC ($n = 40$). Condition 2 includes an insider trading monologue attributed to Sean Hannity, the conservative host from Fox News ($n = 41$). Condition 3 presents a national debt monologue also attributed to Matthews ($n = 44$). Condition 4 shows a national debt monologue attributed to Hannity ($n = 37$).

Once participants read the given monologue transcript, they were instructed to complete several manipulation check questions. Next, participants were asked to estimate the percentage that the news host's message was fact vs. opinion. Following that, the participants responded to PSR questions about the respective news host and source credibility questions. Lastly, participants answered basic demographic questions.

Stimuli

Two monologue transcripts from former Fox News host Bill O'Reilly were adapted for the study to ensure that any significant findings are not merely due to the story topic used in the experiment. The first monologue shared concerns about insider trading by U.S. House of Representatives Nancy Pelosi (D) and former U.S. Rep John Boehner (R), and the second monologue shared concerns about the national debt and attributed the problem to the failures of both Republican and Democratic administrations. Both monologues were between about 400 and 500 words. These monologues were chosen because they include negative opinions about both the Democratic and Republican parties.

The two news hosts—MSNBC's Chris Matthews and Fox News' Sean Hannity—were chosen because they hold similar formats for their respective shows, both news hosts' programs are aired at approximately the same time each weekday evening; both hosts are older white males and have opposing political views on competing networks. In the survey itself, participants were shown a text-only transcript of the monologue with a photo of their condition's partisan news host (which included the cable news network logo and host's name superimposed on the news host's photo) at the top.

Measures

Political Ideology. Respondents separately reported their social political ideology and their economic political ideology as (1) very conservative to (7) very liberal. The two items were averaged to create an overall score of political ideology, $M = 4.45$, $SD = 1.99$, Spearman's $\rho = .865$, p (two-tailed) $< .01$.

Estimation of Factual Content. After exposure to the stimulus, respondents estimated the percentage of the news host's monologue as fact and opinion, respectively. A participant's estimation was required to total to 100% (e.g., a participant could report 65% fact and 35% opinion, or 50% fact and 50% opinion). Using an ANOVA procedure, the estimation of fact in the news monologue did not significantly differ among the conditions, $F(2, 158) = 1.765$, $p = .156$. The average amount of factual content reported by participants in the insider trading monologue was 50.15% ($SD = 29.38$) and in the national debt monologue was 48.22% ($SD = 23.60$). These estimation results are similar to those estimations of factual content vs. opinion content provided by the researchers above.

Parasocial Relationship. Rubin et al. (1985) developed a 20-item PSI scale that measured the strength of a relationship between a television viewer and a newscaster. Later, Rubin and Perse (1987) adapted the scale into 10 items. Although, recent research has argued that the 20-item and 10-item scales do not accurately measure a PSI; rather, they measure something longer-term than an interaction, such as feelings of social involvement, liking of media characters, and thinking of media characters as a person they would like to meet (Dibble et al., 2016). Despite the name of Rubin et al.'s (1985) PSI scale, we regard the PSI scale as measuring more closely a long-term PSR rather than an episodic interaction (Dibble et al., 2016). Therefore, we slightly adapted the phrasing of the 10-item PSI scale (Rubin & Perse, 1987) to measure PSRs with a partisan news host rather than with a soap opera character, which are the types of media characters measured by the PSI scale from Rubin and Perse (1987). Respondents were asked to answer each of the 10 questions ranging from (1) strongly disagree to (5) strongly agree with each of the statements. The scale was reliable, $\alpha = .98$, $M = 2.53$, $SD = .99$.

Source Credibility. McCroskey and Teven' (1999) developed a credibility measurement containing 18 total items that were further split up into three groups on a bipolar scale. The measurement items were anchored by an adjective and its antonym (e.g., honest/dishonest) via a semantic differential scale. Respondents were asked to note their impression of their condition's identified news host after reading the stimulus. The 18-item credibility measure was used to create a single source credibility variable, $\alpha = .97$, $M = 4.22$, $SD = 1.40$.

Manipulation Checks. After reading the monologue, participants immediately answered questions about the monologue content to ensure the manipulations functioned as planned. For the manipulation check question about story topic, 91% of participants in the insider trading topic and 95% of participants in the national debt topic correctly identified the story topic. Additionally, all participants were asked to identify the political ideology of the news host in their condition as (1) conservative, (2) moderate, or (3) liberal. In this case, there should

be significant differences among conditions because Matthews and Hannity do have different political ideologies. Indeed, there were significant differences among conditions about perceptions of the news host's political ideology, $F(3, 158) = 17.634$, $p < .001$. Hannity was perceived as conservative in both conditions (insider trading $M = 1.16$, national debt $M = 1.35$), and Matthews was perceived as moderate (both conditions $M = 2.00$).

Finally, participants were asked if this news host would typically speak this way in a monologue. Across these conditions, about 80% of the sample perceived the monologue as something typical the host would say. There were no differences by condition, $F(3, 158) = .332$, $p = .80$, nor did political ideology significantly predict perceived typicality in a simple OLS regression, $b = .018$, $SE = .017$, $p = .283$.

Results

First, a three-way interaction was run to ensure that there was no interaction of story topic (i.e., insider trading and national debt), political ideology, and host. Results show that there was no significant three-way interaction, $b = 4.37$, $SE = 3.94$, $p = .270$ ($n = 159$, $R^2 = .187$).

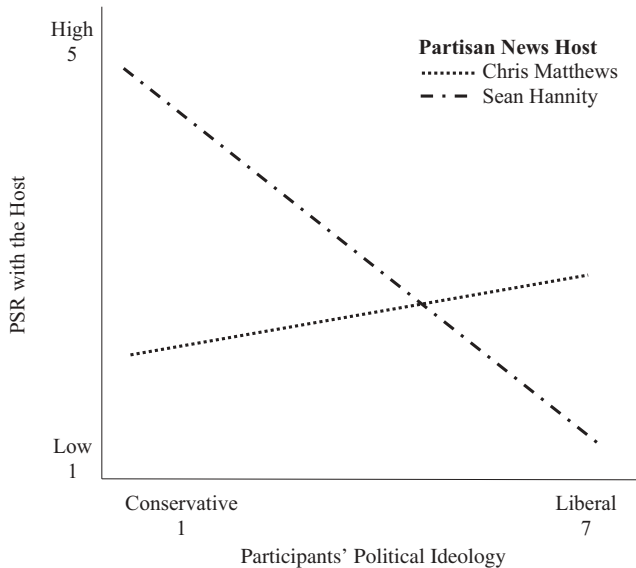
To analyze all hypotheses, model 8 in the SPSS PROCESS macro (Hayes, 2013) was run. The criterion outcome variable was estimation of factual content in the partisan news host's monologue. The independent variable was individual political ideology. The two parallel mediators were PSR with the news host and perceived source credibility of the news host. The moderating variable was partisan news host. Story topic served as a control variable. See Figure 1 for the proposed model.

H₁ predicted that like-minded partisanship associated with a partisan news host would encourage individuals to estimate more factual content in the news host's monologue. The interaction term of individual political ideology and news host was not statistically significant, $b = -2.548$, $se = 2.177$, $p = .25$. Thus, H₁ was not supported.

H₂ predicted that like-minded partisanship associated with a partisan news host would encourage individuals to possess stronger PSRs with the news host. This was supported; the interaction term for individual political ideology and partisan news host was a significant predictor of PSRs with the partisan news host, $b = -.436$, $se = .070$, $p < .001$. The interaction manifests as a transverse interaction (see Figure 2).

H₃ tests the indirect process of influence from individual political ideology to estimation of factual content, as mediated by PSR with the partisan news host and conditioned by partisan news host. Table 1 reports an index of moderated mediation; the bootstrapped confidence interval of the index estimate for PSR does not include zero (point estimate = -2.677 ; 95% CI: $-5.780, -.009$). Also, because the moderator is dichotomous (Matthews or Hannity condition), the index of moderated mediation is also test of equality of the conditional indirect effects in the two groups. This implies that the Hannity and Matthews groups are significantly different

Figure 2
The Graph Depicts the Interaction of Individuals' Political Ideology and Partisan News Host Condition on Individuals' PSRs with the Host, Controlling for the Story Topic



in their slopes (shown by the significant index of moderated mediation). However, when probing the conditional indirect effect through PSR, the indirect effects are shown to be nonsignificant for both the Matthews and Hannity conditions because both CIs include zero (see Table 1). In short, PSRs does not have a significant effect on the estimation of factual content, but there is a significant difference for the Hannity and Matthews groups. Thus, H3 is partially supported. Significant moderated mediation is not occurring through PSRs, but there are significant differences between the two groups.

H₄ predicted that like-minded partisanship associated with a partisan news host would encourage individuals to possess stronger source credibility perceptions of the news host. This hypothesis was supported; the interaction term for individual political ideology and partisan news host ($b = -.631$, $se = .096$, $p < .001$), was a significant predictor of perceived source credibility of the news host. The transverse interaction is shown in Figure 3.

H₅ tests the indirect process of influence from individual political ideology to estimation of factual content, as mediated by perceived source credibility of the partisan news host and conditioned by partisan news host. According to Table 1, there is a significant

Table 1
Model Coefficients for Individual's Political Ideology Conditional Indirect Effect on the Estimation of Factual Content in the Partisan News Host's Monologue, as Mediated by PSR and Perceived Source Credibility and Moderated by Partisan News Host

IV: Individual's Political Ideology			
DV: Estimation of Factual Content in Partisan News Host Monologue			
<i>Moderator: Partisan News Host</i>			
<i>Mediators</i>	Chris Matthews	Sean Hannity	<i>Index of Moderated Mediation</i>
PSR	0.461 (.437) CI: -.083, 1.781	-2.215 (1.186) CI: -4.667, .017	-2.678 (1.447) CI: -5.780, -.009
Source Credibility	0.724 (.536) CI: .003, 2.246	-2.478 (1.205) CI: -5.008, -.259	-3.202 (1.559) CI: -6.617, -.399

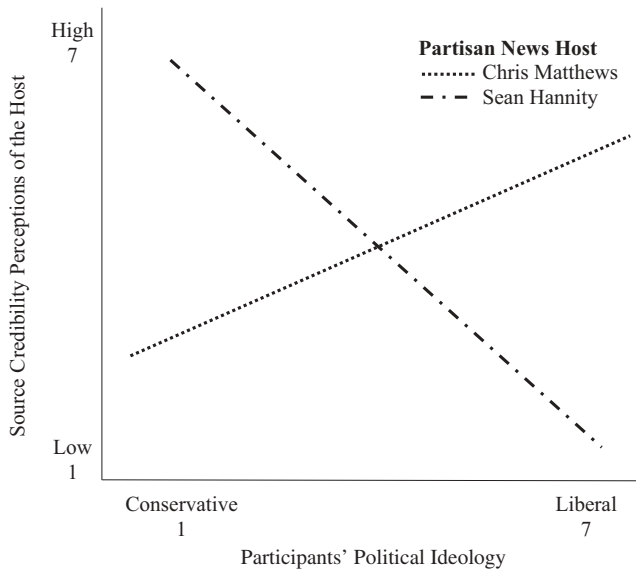
Note: Point estimates of indirect effects reported above with bootstrap standard errors in parentheses; 95% bootstrap confidence intervals (CI) are reported directly beneath the estimates. All CIs reported in bold are significant at a 95% CI.

index of moderated mediation; the bootstrapped confidence interval of the index estimate for perceived source credibility does *not* include zero (point estimate = - 3.202; 95% CI: -6.617, -.399). When probing the conditional indirect effect through perceived source credibility, the indirect effects are significant for both the Matthews and Hannity conditions because both CIs do *not* include zero (see Table 1). This indicates that perceived source credibility's mediating role is meaningful for both the Matthews and Hannity conditions. Thus significant differences exit between the Matthews and Hannity conditions, such that the conservatives in the Hannity conditions experience a stronger process of influence (see the larger effect—i.e., slope—for the Hannity condition in Table 1 for perceived source credibility). In other words, conservatives who read Hannity's monologues were more likely to rate him as credible, which then served as a mediator to increased estimations of factual content in Hannity's monologues. This process occurred for liberals who read Matthews' monologues as well, as indicated by the significant CI range that does not include zero, but the process of influence was not as pronounced.

Discussion

First, it is important to note that individual political ideology did *not* exhibit a conditional *direct* effect on estimation of factual content of a partisan news host's monologue (i.e., H₁ was not supported). In other words, merely sharing partisanship

Figure 3
The Graph Depicts the Interaction of Individuals’ Political Ideology and Partisan News Host Condition on Individuals’ Perceived Source Credibility of the Host, Controlling for the Story Topic



with a host does not generate higher estimations of factual content in a host’s monologue. This finding highlights the importance of examining potential mediators – such as PSRs with the news host and perceived source credibility of the news host – for elucidating how an individual’s political ideology can influence an individual’s estimation of factual content in a news host’s monologue.

While PSRs did not emerge as a mediator, perceived source credibility did emerge as mediator. Table 1 shows that PSRs did not emerge as a significant mediator, although the confidence intervals for both Hannity and Matthews conditions are very close to *not* including zero in the range and thus revealing a mediation process. This suggests that PSRs with like-minded partisan news hosts did not facilitate the relationship to increased estimates of factual content. By implication, PSRs (an entertainment-oriented concept) were not a key concept in understanding how much fact individuals estimate in partisan news. Rather, source credibility (a persuasion-oriented concept) emerged as a key mediator.

Specifically, like-minded partisanship with a partisan news host led to higher estimates of factual content in the host’s monologue; this higher estimation works indirectly through higher evaluations of the host’s credibility. Additionally,

this process occurs more intensely for conservatives who read the Hannity monologues, compared to the liberals who read the Matthews monologues. Perhaps, among conservatives, Hannity is more of a beloved news figure or seen as a more authoritative and legitimate voice of conservative values than Matthews is such a news figure to the liberals. Hannity's show is the top-rated on Fox News, but Matthews' show is rated fourth on MSNBC, behind Rachel Maddow, Lawrence O'Donnell, and Chris Hayes (Katz, 2017). If one thinks about the media landscape, Fox News dominates where conservatives go for political news, while no news source is as pronounced for liberals (Pew, 2017). In other words, conservatives appear to have a stronger loyalty to those partisan news hosts and networks that are considered more conservative.

Next, we consider the perceived *moderate* (rather than liberal) political ideology of Matthews among participants (see Manipulation Checks above) as a potential explanation for the stronger effect for conservatives. It was somewhat surprising that Matthews was not seen as more liberal because Matthews has been a cable news host of *Hardball*, now on MSNBC, a liberal-leaning political news channel, since 1997 (MSNBC.com, n.d.). However, participants answered this partisanship perception question *after* they had read the monologues, so it is possible that the monologue content may have impacted participants' perceptions of Matthews' partisanship. Nevertheless, this helps explain why the mediation model with source credibility did not work as strongly for the liberals.

This broaches a limitation about and challenge for our study: it was exceedingly difficult to find and adapt cable news host monologues that could be perceived as originating from *both* a liberal and conservative cable news host. Each monologue, for both hosts, was adapted from a transcript that was originally featured on the Fox News show "The O'Reilly Factor" by Bill O'Reilly. While the monologues were not an exact transcript and were in fact adapted to "pass" as originating from a potentially liberal *or* conservative news host, it is still possible that the original conservative undertones of the monologues came through, making participants perceive Matthews as more moderate as opposed to liberal. Likewise, it is possible that when a liberal host is perceived as stating a mildly conservative to moderate political opinion, then perhaps that host is perceived as moderate (or even more balanced), but not conservative. But, when a truly conservative host is perceived as stating a mildly conservative to moderate political opinion, then that host is labeled as conservative.

Also, we cannot rule out the potential that conservatives are processing a partisan news host's monologues differently than moderates and liberals when they are exposed to a like-minded host. For example, Republicans, compared to Democrats, experience heightened selective approach and selective avoidance patterns such that fear and anger significantly increase Republicans' pro-attitudinal news exposure (Song, 2017). Additionally, there is evidence that conservatives have more aversion to uncertainty, threat, and ambiguity (Jost & Amodio, 2012). Rather than attributing the partisan nature of our findings to solely the experimental design

(i.e., using Matthews rather than another liberal cable news host), this recent research discourages us from ruling out the possibility that partisans may experience partisan news host monologues differently.

Next, we deliberate the ramifications of these results. We must consider that there are consequences to these findings, and that the results say something about our politics and how our news is presented. When a person who identifies as conservative strictly watches a conservative news host and believes they are presented with facts – when some (or most) of what is presented is opinion – they may only receive the information and opinion that the conservative news host wanted to share. It can be hard for viewers to make informed decisions on topics, when fact and opinions are indistinguishable for the viewers. When some viewers believe partisan news hosts to be credible, they may never seek out more information on the topic in order to make more informed decisions. This tendency should give pause to news consumers who desire to make more informed and cognizant political decisions. While news consumers should consider the source of the information and news, they should also be careful to consider how sources may be impacting their estimation of fact and opinion.

We also must consider those participants who did not have a partisanship match with the partisan news host. For example, conservatives exposed to Matthews estimated less factual content in the monologue than when Hannity's name was attributed to the same exact monologues. We argue that partisan identity cues and motivated political reasoning influenced how partisans evaluated the news host monologues. Like-minded partisanship associated with partisan news hosts encouraged greater perceived source credibility of the news hosts, as these like-minded participants gave more leeway to a like-minded host when it comes to estimating the facts stated by the host. Moreover, in the real world, selective exposure to politically like-minded news hosts likely compounds these problems of partisanship and credibility perceptions to interfere with the estimation of factual content. Indeed, it is sometimes difficult for political partisans to agree on basic facts. Finally, while like-minded partisanship with partisan news hosts also encouraged more PSRs, PSRs did not serve as a significant link to higher estimation of factual content. This implies that PSRs are not playing as important a role as source credibility in estimates of factual content.

Limitations and Future Research

As stated previously, a limitation to the study is that the monologues were adapted from Bill O'Reilly monologues that aired in 2011 (insider trading monologue) and 2015 (national debt monologue). There is a small chance that participants could have been exposed to these transcripts previously; we did not ask participants if they had encountered the monologue before. Further, Bill O'Reilly was the original conservative news host intended for this study; he was not used in our experiment because he had been dismissed from Fox News just before the start of data collection.

Future research in this area that links partisan media, entertainment concepts (e.g., PSRs), persuasion concepts (e.g., source credibility), and political ideology should use more political topics beyond the economy. This experiment incorporated less sensationalized and politicized issues in the news (i.e., national debt and insider trading). Researchers in the future might also consider including a more diverse group of hosts. Matthews might not have been the most appropriate liberal news host to include in this study. Choosing another liberal news host such as MSNBC's Rachel Maddow or even choosing a liberal entertainment program host (e.g., Stephen Colbert or John Oliver) could strengthen the explanations of the results for liberals.

In conclusion, this study adds to the literature on partisan news consumption such that it examines a process of influence and uncovers an indirect link (via source credibility) between how our partisanship impacts our estimation of factual content in political messages. Studying indirect relationships is very important to uncovering potential processes of influence, especially because direct effects (in this case, political ideology) do not always manifest. This study helps shed light on the question of why like-minded cable news viewers might overestimate fact when consuming information from a partisan news host.

Disclosure statement

No potential conflict of interest was reported by the authors.

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Media Credibility and the Base Rate Fallacy

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The base rate fallacy describes how people rely on exemplars more than on base rates, when making judgments about a population. We provide a test of the base rate fallacy, considering the critiques of the research on the base rate fallacy on theoretical grounds. It is proposed that while trustworthy media outlets will allow readers to believe in anecdotal evidence found in news stories, readers will rely instead on base rates when presented with less trusted sources. Findings indicate that media credibility moderates the use of exemplars, although only among those with high trust in mass media.

Since Bar-Hillel's (1980) classic paper, most research in communication has supported the base rate fallacy, the idea that people rely more on exemplars than on base rates when making judgments about a population (Allen, Preiss, & Gayle, 2006). Selected theories in communication, such as priming, are based on the notion that people rely more on exemplars than on base rate (Zillmann, 1999). The results on this fallacy are particularly surprising, and perhaps paint a dim view of people's ability to make reasonable judgments. This is because base rates, or percentages of people in a population with a given characteristic, are more informative than individual examples.

In spite of general support for the base rate fallacy in communication research, research on the base rate fallacy has been criticized based on methodological (Boster et al., 2000) and theoretical grounds (Gigerenzer, 1991). We provide a test of the base rate fallacy considering these critiques. In particular, we propose that trust in media outlets is an important moderator of base rates (Wanta & Hu, 1994). Trustworthy media outlets are likely to allow readers to put their faith in anecdotal evidence found in news stories. With less trusted sources, readers will rely instead on base rates. Prior research has only explored research using relatively trustworthy media outlets, biasing the results in favor of supporting the base rate fallacy.

The aim of the current research is to explore how context, in particular, the credibility of a media outlet, moderates the use of base rates and exemplars. We

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will first discuss the literature on the base rate fallacy, and explain the potential for media credibility to moderate the influence of base rates. The hypothesis and the method of our experiment will then be explained. We tested the base rate fallacy with an online experiment with high ecological validity, in addition to addressing some of the concerns of prior critiques of the base rate literature (Boster et al., 2000). Our findings show that media credibility moderates the use of exemplars in mass media, although only among those with high trust in mass media. A discussion of the study results and their implications is then provided, along with limitations to the current study and potential areas for future research.

Literature Review

Base Rate Fallacy

The base-rate fallacy refers to the influence of nondiagnostic anecdotal information relative to more informative base rate information in judgments about the likelihood of events (Bar-Hillel, 1980). The lawyer and engineer problem presented by Tversky and Kahneman (1973) is a typical example. A person is asked to judge, based on a brief description of personality and other characteristics, whether a person from a group of 100 with 30 lawyers and 70 engineers is a lawyer or an engineer. Based only on base rate characteristics (the distribution of cases in the population from which the individual case is drawn), the probability of an engineer is 70% and the probability of a lawyer is 30%. But according to experimental evidence, people typically ignore this base rate information, instead of using the most informative descriptive information provided to make a judgment about a person's profession. This is the base rate fallacy: individuals tend to ignore base-rate data, by relying on details about the specific exemplar instead, even if the latter are not very informative (Tversky & Kahneman, 1980).

Previous studies show that people neglect base rates, relying instead on exemplars, or case-specific information. The classic study of Bar-Hillel (1980) shows that participants rely on a specific case rather than base rates, while solving a series of probability problems. Lyon and Slovic (1976) ask participants to estimate probabilities based on information, including prior probabilities and details of a specific case. The results indicate that exemplar-based information is more influential in probability estimates than statistical evidence. A number of studies have explored the base rate fallacy in diverse contexts, such as judging social stereotypes (Locksley, Hepburn, & Ortiz, 1982; Obrecht & Chesney, 2016) or integrating base rate information with views of sources (Birnbaum & Mellers, 1983).

Several meta-analyses have been conducted, in order to address the base rate fallacy literature. In their review of persuasive appeals, Allen and Preiss (1997) find that statistical evidence is more effective in changing attitudes than narrative evidence. A follow-up experiment shows that a message mixed with narrative and statistical evidence is more influential than a message with only narrative evidence

or only statistical evidence (Allen et al., 2000). To sum up, previous meta-analytical evidence shows that a combination of exemplars and statistical evidence is more persuasive, but statistical evidence is more persuasive than exemplars alone.

The persuasive power of statistical evidence, however, is distinct from the influence of base rates in messages that are not part of a persuasive appeal (such as news stories that provide base rates and/or anecdotal evidence). Allen et al.'s (2006) meta-analysis of the base-rate fallacy literatures provides support for the presence of the base rate fallacy in judgments about probabilities. Their investigation of 14 studies shows that participants are influenced more by examples than base-rate data, while making evaluations. The review also suggests that disregard of base rates appears not only in abstract tasks involving judgments about probabilities, but also during the processing of media messages.

Regarding media messages, exemplification theory, a theory about mass media effects, explains how specific examples can be more persuasive than statistical evidence in media messages. According to Zillmann (1999), exemplars refer to anecdotal evidence that represents certain groups or events by illustrating their typical features. The new media often use exemplars to report news stories, as they increase the drama and personalization of these stories. However, while enhancing the vividness of news stories, the use of exemplars has consequences for news audiences; as news consumers weigh this anecdotal evidence in making judgments about the world (Zillmann, 1999), they may rely on the vividness of exemplars relative to base rates (Daschmann & Brosius, 1999).

Many studies have tested exemplification theory. Gibson and Zillmann's (1994) study shows that readers of a news story with unrepresentative exemplars about extreme consequences for victims of carjacking are more likely to consider carjacking a more important issue – than readers exposed to more representative distribution of exemplars – with less extreme consequences. Other research has also found the strong impact of exemplars in television news (Lefevere, De Swert, & Walgrave, 2012), television magazine shows (Daschmann & Brosius, 1999) and online stories (Knobloch-Westerwick & Sarge, 2015).

Despite the large amount of evidence in favor of the base rate fallacy, there are some critiques of the literature which established the base rate fallacy. First, as Allen et al. (2006) noted in their meta-analytic review of the base rate fallacy literature, there is an apparent contradiction with a large body of literature in communication which shows that statistical evidence is more persuasive than anecdotal evidence in persuasive messages (e.g. Allen & Preiss, 1997). It is somewhat paradoxical that base rates are ignored or are not as influential as anecdotal information, given this literature on persuasion. While these authors offer some efforts at resolving this paradox, the conflict between the persuasion literature does give some leverage to the critics of the base rate fallacy literature.

Second, Boster et al. (2000) suggest that there are methodological flaws with a number of studies on the relative influence of base rates, arguing that base rates are not experimentally manipulated in previous studies. It is impossible to

determine which type of information is more effective without randomly exposing experimental subjects to base rate information conditions. In their own experiment, manipulating base rate conditions as well as the distribution of exemplars, the authors find that base rate information has a relatively strong impact on judgments, contrary to the base rate fallacy literature.

Another concern about the base rate fallacy literature is that contextual factors may contribute to the use of base rate information. Gigerenzer (1991) argues that the base rate fallacy and the larger heuristics and biases pioneered in the literature by social psychologists is not so much a full-blown theory but a series of empirical results that do not specify under which conditions fallacies occur.

Some empirical works on base rates in the psychology literature support the idea that contextual factors moderate the impact of base rates and exemplars. Relevant to the current study, Hinsz, Tindale, Nagao, Davis, and Robertson (1988) argue that the quality of anecdotal evidence is an important factor in the use of anecdotal versus base rate information. As the quality of anecdotal evidence improves, people become more likely to weigh this information in their judgments. Additionally, Bar-Hillel (1980) indicates that more specific information about an issue would engender people to consider information as more relevant.

Lyon and Slovic (1976)'s study also shows that individuating information affects people to believe the issue is relevant and specific. Other work supports the importance of the validity of anecdotal information, as when the process by which anecdotal evidence is selected is made salient, the base rate fallacy disappears (Gigerenzer, Hell, & Blank, 1988). These findings suggest that contextual factors are important in the relative influence of base rates versus exemplars. In addition, these findings may also apply to evaluating mass media effects: there may be some feature of media messages (e.g. the quality of anecdotal evidence provided in news stories) that contributes to the use of exemplars over base rates.

One important contextual feature of exemplars as they appear in mass media is source credibility. Source credibility has long been recognized as an important feature of persuasive messages (Hovland & Weiss, 1951). There is also evidence that source credibility moderates the influence of base rates and anecdotal evidence (Koehler, 1996). For example, Ginossar and Trope (1987) found that base rates are more influential, when coming from sources with low credibility than with highly credible sources. Similarly, Hinsz, Tindale, and Nagao (2008) show that people tend to dismiss exemplars, when the source is not credible. However, the role of source credibility within the setting of base rate fallacy has not been illuminated thoroughly, despite its theoretical importance (Koehler, 1996).

Audience trust varies by specific media outlets, and, similar to source credibility in the persuasion literature, has an important impact on how the audience responds to the messages encountered in mass media (Wanta & Hu, 1994). We propose that the perceived credibility of specific media outlets moderates the impact of exemplars. When people encounter a media message including exemplars, people could reasonably assume that these exemplars are provided for a reason (Grice, 1989).

Presumably, a media source that provides exemplars is doing so to communicate something about the underlying population. If the source is trustworthy (e.g., a highly regarded media outlet), then exemplars could be a useful cue in inferring features about the underlying population. On the other hand, if the source is not trustworthy, then the source's efforts to communicate something about the underlying population with exemplars will more likely be ignored.

The distribution of exemplars provided in *The New York Times*, for example, can be relied upon to provide a cue as the distribution of the population, because journalists of a prestigious newspaper can be relied upon to provide relevant evidence and expend the relevant resources to obtain the relevant mix of sources in reporting. Less trusted sources, such as tabloids, local weeklies or school newspapers, do not adhere to the highest journalistic standards, and lack the resources to include a representative mix of sources in a news story. Exemplar based information encountered in these outlets should be less influential.

Most studies of the base rate fallacy in mass media outlets do not vary the credibility of the news source. If people trust the news outlets encountered in these news stories, then they are safe in relying on the distribution of exemplars in making judgments about the population. That is, the base rate fallacy, as it occurs in studies of mass media, represents people's willingness to rely on cues provided by trusted news sources. What remains to be seen is if people are less willing to rely on the distribution of exemplars encountered in a less trusted source.

Another way of putting this is that the current evidence on the base rate fallacy in mass media only explores the relative influence of base rates and exemplars in a limited set of contexts (i.e., when encountered in trusted media outlets). We aim to expand the contexts in which information about the population is encountered to explore the generalizability of the results and better understand the causal mechanism behind the use of exemplars and base rates.

Research Hypotheses

Similar to prior research, the current study will test the standard hypotheses about the relative impact of base rates and the distribution of exemplars in mass media messages in the hypothesis below.

H1: The influence of the distribution of exemplars on judgments about frequencies in the population is greater than that of base rates.

Media credibility could potentially moderate the impact of exemplars. Highly credible outlets can be trusted to provide relevant and accurate information in the context of reporting. Therefore, the distribution of exemplars in highly credible media outlets is a valid cue about the broader population. Less credible outlets cannot be trusted to present a representative distribution of exemplars. This is because of the assumption that less credible media outlets may lack resources to

provide relevant exemplars, may not adhere to professional norms in reporting, or may be too ideologically slanted to provide an accurate distribution of exemplars. To validate this assumption, the following hypothesis is proposed.

H2: The influence of exemplars on judgments about populations increases as media credibility increases.

A final hypothesis concerns the role of individual factors in moderating the influence of media credibility and exemplars. People differ in their trust in mass media sources (Bakir & Barlow, 2007), which may interact with media credibility to moderate the influence of base rates. Thus, people with higher levels of trust in mainstream media may be more likely to respond to exemplars in mainstream media. To examine this assumption in the current study context, a hypothesis is provided as follows.

H3: The impact of exemplars in mainstream media outlets on judgments about populations is moderated by trust in mainstream media.

Methods

Participants

Participants were recruited from a participant pool in a communication department at a large Midwestern University. Two hundred and five students participated for earning course credit. The sample was 52% female, 11% African American, 15% Asian, 43% Democratic and 49% Republican. The mean age of the sample was 20 ($SD = 1.6$).

Procedure

Participants were randomly assigned to a treatment condition. The treatment condition involved a news report about support for the Affordable Care Act (“Obamacare”) in the context of debates, at the start of the Trump administration, to repeal and replace or otherwise reform the major legislative accomplishment of Barack Obama’s presidency. The issue of health care was selected for its high salience. However, the news story dealt with support for Obamacare among residents in Kentucky, as the Midwestern sample would not know about the level of support in a Southern state. Respondents then responded to questions about perceptions of the levels of support among the Kentucky population, some demographics and ratings of media trust, and items about their ratings of the news outlet in the treatment condition.

Stimulus Material

All respondents were exposed to an online news story about support for Obamacare in Kentucky, titled “Kentucky Residents Reflect on Obamacare.” Respondents were randomly assigned to be exposed to a news source with high credibility, which is a news story ostensibly from CNN’s website (www.cnn.com); or they were randomly assigned to read a story with low credibility, which is a news story from *The College Heights Herald*, a student newspaper serving Western Kentucky University (www.wkuherald.com). Armstrong and Collins (2009) argue that it is reasonable to assume that people trust mainstream media outlets more than college sources. Students newspapers are a training ground for amateur journalists, while mainstream outlets employ professional journalists. In addition, college newspapers are funded by the university, while mainstream outlets have larger budgets for use to cover stories.¹ The stories were created with a program designed to mimic the exact look of the real websites (clonezone.link). While the source characteristics, appearance, and layout of the stories differed to increase the realism of the sources, the content of the stories was identical across experimental conditions.

Within each story were both base rates and exemplar-based information about support for Obamacare. People read the results of a recent survey of Kentucky residents attributed to the Kaiser Family Foundation that showed either that “About one quarter (23%) ... ” or “About three quarters (77%) of respondents reported that they supported the Affordable Care Act.”

At the end of each story were four quotes from Kentucky residents that reflected either positively or negatively on Obamacare. People in the high-support exemplar condition were exposed to three positive and one negative quote, and those in the low-support exemplar condition were exposed to three negative and one positive quote. (A sample positive quote is “Regina Rice, 47, said about the Affordable Care Act, ‘I’m praying that this helps us. I think they are going in the right direction.’” A sample negative quote is “Deborah Brown, 56, is convinced that Obamacare only helps the rich. ‘Obama went against his word’ she explains. ‘He made all those promises about how he was going to help the poor, the elderly.’”

Measures

The main outcome measure consisted of respondents making a judgment about how many people in Kentucky (the focus of the news article) support Obamacare. Respondents could place a slider at any point on a 0–100 scale to indicate the percentage of residents who support the policy.

Participants responded to three items about their trust in media (e.g., “How much do you trust the media – that is, newspapers, radio, and television – when it comes to reporting the news accurately?”); these items were combined into a standardized,

additive scale ($\alpha = .73$). Following that, participants were asked to rate their level of support and providing demographic characteristics (i.e., political party, gender, race and age). Afterwards, they were asked, regardless of whether they had heard of the media outlet they read earlier in the study, how much they trusted the outlet on a five-point scale ranging (from “very low” to “very high”). Participants were also instructed to identify the media outlet from a list of four (“Thinking of the article you read, do you remember what news outlet the story came from?”); they could also respond by choosing “none of the above” or “could not remember.” The correlation matrix of all of the measures is displayed in Table 1.

Manipulation Check

First, participants were asked which outlet the news story they read came from, and could select from among four sources listed. Forty-seven percent in the high trust condition recalled correctly that the story came, from CNN versus only 18% in the low trust condition who incorrectly said that the story was from CNN ($p < .01$, one-tailed). Participants exposed to the school newspaper story were less likely to correctly identify the source (which is expected, as the source is very obscure); 9% of those exposed to the story correctly identified the source, versus 5% in the high trust condition incorrectly thought that the source was the college newspaper listed. This difference between study conditions was not statistically significance ($p = .09$, one-tailed). People exposed to the CNN story were not more likely to rate the outlet as trustworthy ($M = 3.0$ on a 5-point scale for the high credibility story and 2.8 for the low credibility story), as this difference is not statistically significant ($p = .14$, one-tailed). While there are some differences in perceptions of the outlet source characteristics, not all of these were statistically significant.

Individual differences in perceptions of mainstream media credibility may account for the lack of detectable differences in media trust. People low in media

Table 1
Correlation Matrix of Key Variables

	Media Trust	Republican	Democrat	Perceived ACA Support
Media Trust	1.0 <i>200</i>	-	-	-
Republican	-.16* <i>200</i>	1.0 <i>205</i>	-	-
Democrat	.19* <i>200</i>	-.86* <i>205</i>	1.0 <i>205</i>	-
Perceived ACA Support	.05 <i>200</i>	-.12 <i>202</i>	.11 <i>202</i>	1.0 <i>202</i>

* = one-tailed significance, $p < .05$. N's in italics.

trust may not see a big difference in credibility between mainstream media outlets and less credible sources. A regression analysis confirms that this is the case. Regressing perceived trustworthiness of the source on media trust, which is an indicator for media credibility condition, and on their interaction yields a coefficient that is positive and statistically significant ($p < .05$, one-tailed). This indicates that the media credibility manipulation had a greater effect on perceptions of credibility for those with high levels of trust in mainstream media than for those with low levels of trust, the baseline category. In the analyses below, we analyze those in the mainstream and non-mainstream condition separately.

Results

Study results are analyzed using regression analysis. The dependent variable is the rating of the percentage of people in Kentucky who support Obamacare (from 0% to 100%). The independent variables are indicator variables for the treatment condition, including 1) High Base rate condition (1 for those informed that a high percentage support Obamacare, 0 for those told that a low percentage support Obamacare); 2) High Exemplar condition (coded 1 for those exposed to three out of four exemplars who support Obamacare, 0 for those exposed to only 1 out of 4 exemplars who support Obamacare), and 3) Media Credibility condition (1 for those exposed to the story in the high-credibility outlet, and 0 for those exposed to the low-credibility outlet).

These results are presented in the first column of [Table 2](#). The coefficient for the high exemplars condition is 6 ($p < .05$, one-tailed); in other words, people exposed to the high percentage of exemplars who support Obamacare rated the percentage of people on average perceived the level of support for Obamacare at 6 percentage points higher than the baseline group (the low exemplar condition). Those exposed to the high base rate rated support for Obamacare, on average, perceived support as 13 percentage points higher than those in the baseline condition (low base rate condition), a statistically significant effect ($p < .05$, one-tailed). A comparison of the coefficients for the base rate and exemplar condition is statistically significant (F-test, $p = .04$, one-tailed). Contrary to the base rate fallacy literature, we found that base rates may be more effective than exemplars on judgments.

In the regression analysis, we included a term to control for the media credibility condition, although this is not directly relevant to the first hypothesis. The coefficient for media outlet credibility is positive, small (1 percentage point) and not statistically significant ($p = .6$).

The first set of regression results does not support H1: contrary to the base rate fallacy, we find no evidence that people weigh anecdotal evidence more heavily than base rate information, when making judgments about a population.

H2 concerns the interaction of exemplar information and source credibility. To test this hypothesis, the model estimated in column 2 of [Table 2](#) includes the same variables as in Model 1, and adds an interaction of credibility X exemplar condition.

Table 2
Perceptions of Percentage Supporting Obamacare, Base Rates and Exemplars

			Model 3	Model 4
	Model 1	Model 2	Low Credibility Condition Only	High Credibility Condition Only
	B (SE)	B (SE)	B (SE)	B (SE)
High Exemplar	5.5(2.9)*	3.4(4.3)	3.3 (4.7)	7.7* (3.9)
High Base Rate	12.7(2.9)*	15.3*(4.4)	15.6* (4.7)	9.7* (4.0)
High Credibility	1.3(2.9)	1.4(5.0)	—	—
Hi Exemplar	—	4.5 (5.9)	—	—
X Hi Cred				
Hi Base X Hi	—	−5.2(6.0)	—	—
Cred				
Hi Exemplar			1.3 (6.8)	10.2* (5.6)
X Media Trust				
Hi Base			2.0 (6.9)	−6.6 (5.8)
X Media Trust				
Constant	40.1(2.9)	40.0(3.8)	39.6 (4.0)	41.1 (3.2)
N	202	202	94	107
R ²	.10	.11	.12	.15
F (df)	7.4*(3, 198)	4.7*(5, 196)	2.4* (5, 88)	3.6* (5, 101)

* = one-tailed significance, $p < .05$. + $p = .06$, one-tailed. SE's in parentheses.

The coefficient estimated for this term will demonstrate whether the exemplar condition varies by the credibility of the media outlet. Because the source of the base rate information is the same in both conditions (both stories indicate that the base rate information come from the same source, a Kaiser Family Foundation poll), we do not expect an interaction between source credibility and base rate condition. Nevertheless, the interaction term for base rate X credibility is included in the model as a control. In Model 2, the coefficient for exemplar X credibility is not statistically significant. The results do not provide support for H2; media credibility condition does not appear to moderate the influence of exemplars.

As discussed earlier in this section, not every respondent reacted in the same way to the news outlet credibility condition. People with low levels of trust in the media did not distinguish between the outlets presented in the news credibility conditions, while those with high levels of trust did. We therefore performed the same analysis in column 2 separately for those with low and high levels of trust in media credibility conditions, respectively. There should be an interaction effect for *high media trust X high exemplar* condition for those with high levels of media trust (because these respondents distinguish between credible mainstream media outlets and those that are less credible), while we do not expect an interaction effect for

those assigned to the low media credibility condition. The results are presented in columns 3 and 4 of Table 2.

Models 3 and 4 explore the interaction of *media trust* $\times$ *base rate* condition and *media trust* $\times$ *exemplar* condition. The interactions are explored separately by media condition, as media trust relates to trust in mainstream media (e.g. CNN) and not to non-mainstream media (e.g., a student paper). Model 3 consists of people assigned to read the student paper. In this condition, the base rate condition is statistically significant and positive; statistical information influences people's perception of public opinion for those with average levels of trust in mainstream media. There is no evidence of an interaction between mainstream media and base rate condition, nor for an interaction between mainstream media and exemplar condition. Model 4, with only those assigned to the mass media condition, there is evidence of a positive interaction between news media trust and exemplar condition; the coefficient for the interaction term is positive and statistically significant ($p < .05$, one-tailed). The results reveal an interaction between media trust and exemplar condition for those in the mainstream media condition, supporting H3.²

Discussion

The results of our study indicate that base rate information is more influential than exemplar information. Prior work on the base rate fallacy has alternately argued that a) people do not respond to base rate information (Bar-Hillel, 1980) or b) base rate information is influential, but exemplar-based information is more influential than base rate information (Lyon & Slovic, 1976). Our results challenge these past findings. Base rates, in our study, are arguably more influential than the distribution of exemplars.

Why do our results differ from prior work? We point to three characteristics of the current study. First, as Boster et al. (2000) argue, in much prior work on the base rate fallacy, base rate information is not randomly assigned. Similar to Boster et al.'s study, we randomly assigned people to exemplars and base rate conditions, and find that base rates are not only influential, but are perhaps more influential than exemplars. The second reason that the current results differ from prior work is that the content (a highly salient and controversial health bill, currently under a high-profile debate) is of greater importance than issues discussed in prior work, and therefore may have been processed more deeply (e.g. Petty & Cacioppo, 1984), making people less likely to commit the base rate fallacy. Finally, the stimulus in the current study is highly ecologically valid. In some (but not all) prior work on the base rate fallacy, stimulus materials are not ecologically valid, typically consisting of brief descriptions provided by the experimenter. Our work (similar to some prior work on base rates and exemplars; e.g., Zillmann & Brosius, 2012) exposed people to base rates and exemplars in the context of an actual news story. The current stimulus, using software to replicate the look of actual news sources, is representative of how people are exposed to exemplars and base rates online.

We also tested whether source characteristics interact with exemplars, but failed to detect an interaction effect. One possibility is that people differ in their trust of mainstream media, which could mitigate the interaction of source characteristics and exemplar information. To test this possibility, we explored the interaction of media trust and high number of exemplars for people exposed to high and low credibility sources separately. We found that trust in mainstream media moderates the impact of exemplars in mainstream, high credibility outlets.

Additionally, the results of the current study suggest that editorial bias, in terms of violating base rates, could be an issue of journalistic ethics for news outlets. For example, ideologically slanted news outlets may use a biased distribution of exemplars in news stories, in order to persuade viewers. This may result in audiences committing the base rate fallacy, and accept the exemplars as representative. Future studies could use the distribution of exemplars employed in news stories as an indicator of news bias. Specifically, content analysis could be used to measure whether this form of bias exists or not, and to what extent news outlets display biased distributions of exemplars when reporting the news.

To sum up, the current study has several implications on base rates research. Most previous research on the base rate fallacy shows that individuals are more influenced by exemplars than base rate information. However, the current study suggests a different phenomenon: base rate information is more effective than exemplars. The results correspond to the contention of Hinsz et al.'s (1988) paper, which notes that the impact of exemplars becomes marginal when source is less credible.

Researchers should develop a more detailed explanation of how individuals' judgment process could be moderated by the characteristics, such as source credibility. One of the limitations of the current study is that while there are many studies on the base rate fallacy, some other components of this effect are under-theorized. Many factors could moderate the influence of base rates and anecdotal evidence, including media platforms and issue topic. Future research should also further explore the apparent contradiction from previous literature addressing the influence of statistical information in persuasive messages versus the apparent lack of influence of base rates in prior literature. More theorizing and a carefully considered manipulation of source credibility in the future research could be used to build on the analyses in the current study.

Most important, future work could examine base rate studies from a more process-based perspective. Although the current research has explored the outcome (i.e. judgments) of the base rate fallacy, future studies could explore the communication process in which the phenomenon is situated. For example, to what extent is the base rate fallacy the result of effortful thinking about the nature of the source and evidence? Theories such as the Elaboration Likelihood Model (Petty & Cacioppo, 1984) propose that elaboration moderates the persuasive impact of messages. To what extent is the base rate fallacy magnified or limited by effortful thinking? A deeper exploration at underlying processes could illuminate the current study's results.

Conclusion

The current study hypothesized that media quality would interact with the distribution of exemplars to influence judgments. This hypothesis was not supported, although there was some evidence of an interaction effect for people with a high degree of trust in the mainstream media. We have summarized how these results relate to theory, although some limitations of the design may have contributed to the null result relating to the interaction effect of media quality and the distribution of exemplars.

First, characteristics of the sample may contribute to a null result. The student sample may differ from the broader population in ways that contribute to a null result (or otherwise limit the generalizability of the results). Younger adults are typically less engaged in politics than older adults (Verba, Schlozman, & Brady, 1995), and may have less experience with prominent media outlets than older adults. Moreover, the sample may not be large enough to statistically detect an interaction effect. An experiment with a larger sample could evaluate some of the hypotheses in the current study, which fell just shy of statistical significance.

Additionally, using only one issue can be another factor limiting the generalizability of the results. Support for health care reform was chosen as a) it is a familiar issue that is b) important to many voters (Gallup, 2017). Nonetheless, the content of the study deals with only one issue, and the results may not be generalizable to other issues. For example, people may be more prone to the base rate fallacy when considering support for less salient policies, as they are less involved with the issue and do not process mass media messages as carefully.

Finally, the main effect of the manipulation check indicates that participants did not significantly differentiate the trustworthiness of two news sources, CNN and the College Heights Herald. Specifically, participants exposed to the school newspaper story were less likely to accurately rate the source, and those exposed to the CNN story were marginally more likely to identify the outlet as trustworthy; but these differences are not statistically significant. This may be in part due to declining levels of trust in the mainstream media (Knight Foundation, 2018). As the manipulation was not effective enough to lead respondents to consider that the two news sources are different in trustworthiness, we do not observe a strong impact of media trust on exemplification effects. Future work should replicate the current results with a stronger manipulation.

The base rate fallacy has been an important topic in the field of communication, as much work on media effects draws on the “biases and heuristics” approach developed in social psychology (Tversky & Kahneman, 1980). Recent reviews conducted by communication scholars have confirmed the fallacy in meta-analyses (Allen et al., 2006). Yet the current study finds that base rate information is more influential than exemplars.

Recent critiques of the biases and heuristics approach suggest that the approach is not a theory so much as a group of empirical results without a consideration of which ecological factors contribute to a given bias or fallacy (Gigerenzer, 1991). Our study is

a first step in exploring an important contextual variable: source credibility. Extant literature has a long history of exploring contextual factors that enhance or diminish the influence of persuasive messages and media effects, including source characteristics (Petty & Cacioppo, 1984), medium (Andreoli & Worchel, 1978), and argument quality (Petty & Wegener, 2014), among others. Future research should attempt to establish which factors contribute to commonly occurring fallacies, in order to develop a more theoretically informed account of heuristics and biases in media effects.

Notes

1. However, Armstrong and Collins (2009) did not find empirical support for these claims.
2. A regression model including all participants with controls for High Exemplar, High Credibility and Media Trust, along with all possible interaction terms, yields a statistically significant ($P < .05$, one-tailed) interaction term for High Exemplar X High Credibility X High Trust.

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Involvement without Knowledge Gain: A Meta-Analysis of the Cognitive Effects of Website Interactivity

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Involvement without Knowledge Gain: A Meta-Analysis of the Cognitive Effects of Website Interactivity

Fan Yang and Fuyuan Shen

A meta-analysis of 37 studies was conducted to investigate the cognitive effects of website interactivity. Study results suggested that interactivity significantly enhanced user involvement, but did not help with message comprehension, elaboration, memory, or knowledge gain. Other findings showed that the cognitive effects of website interactivity did not vary by different operationalizations of interactivity and that high levels of interactivity failed to benefit users' cognitions. Additional results indicated that for experiential websites, incorporating interactivity facilitated users' cognitive performances. The same benefit of website interactivity, however, failed to hold true for informational websites.

Communication technologies have been traditionally viewed as channels for transmitting information from sources to receivers. Yet the Internet evolution has made websites and other online media much more than a simple message channel. With various interactive features enabling users to select, control and produce contents online, the boundary between message and medium has increasingly blurred. Interactivity has transformed the nature of traditional websites by expanding the means of message delivery and how users process information online (Sundar, Oh, Kang, & Sreenivasan, 2013).

Website interactivity refers to the technological attribute that allows website users to communicate with the website or with other users reciprocally and synchronously (Bucy & Tao, 2007; Sundar, 2004). It is a unique characteristic that sets computer-based new media apart from traditional media (McMillan, 2002; McMillan, Hoy, Kim, & McMahan, 2008). Despite the considerable research

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attention that the concept of interactivity has received in recent years, it remains unclear as to how it influences website users' cognitions – the mental activities of processing information, initiating thoughts, enhancing memorizations, and acquiring knowledge (Neisser, 2014).

Some suggested that although interactive websites significantly increased user enjoyment, positive attitudes and desirable behavioral intentions, its overall cognitive effect was not significant (Yang & Shen, 2018). Yet cognition can be measured in multiple dimensions including attention, comprehension, elaboration, recall, and knowledge gain, all of which are key concepts in cognitive psychology (J. Anderson, 2015). As such, a single broad measure is not enough to capture the nuanced cognitive effects of website interactivity.

Understanding how website interactivity impacts users' cognitive responses is essential, as cognition is at the core of our everyday decision-making processes (Friedenberg & Silverman, 2006). While interactivity has applicability to all sorts of new communication technologies, websites remain the major means through which we search and obtain new information daily. This study conducts a meta-analytic review of prior research on how interactivity affects website users' cognitive responses including cognitive absorption, comprehension, elaboration, memory, and knowledge gain. It also examines how these effects might be moderated by relevant factors. Findings from this meta-analysis will improve our understanding of psychological effects of interactivity, and help inform website design strategies to improve users' information processing and knowledge gain online.

Theoretical Background

Explicating Interactivity

Interactivity is perhaps one of the most often studied yet least agreed-upon concepts in the existing communication technology literature (see Rafaeli & Ariel, 2007). As a multifaceted variable, interactivity has been defined in different ways ever since scholarly inquiries took off in the 1990s. Early interactivity research defined it by categorizing the functional attributes involved (Bucy, 2004b). Interactivity has been conceptualized in terms of synchronicity (Liu & Shrum, 2002; Mundorf & Bryant, 2002), control (Jiang, Chan, Tan, & Chua, 2010; Kim, 2011), choices and options (Macias, 2000, 2003; Song & Bucy, 2007; Warnick, Xenos, Endres, & Gastil, 2005), multi-layer hyperlinks (Sicilia, Ruiz, & Munuera, 2005; Sundar & Constantin, 2004; Sundar, Kalyanaraman, & Brown, 2003), directionality (Downes & McMillan, 2000; Wu, Wang, Wei, & Yeh, 2013), message exchange (Kim & Stout, 2010; Lee & Shin, 2012; Sundar, Bellur, Oh, Jia, & Kim, 2016), and responsiveness or feedback (Evans & Gibbons, 2007; Stewart & Pavlou, 2002; Sun & Hsu, 2013).

As research has moved away from describing what interactivity includes to theorizing what it is, two different approaches emerged: interactivity as a human-to-human versus

a human-to-computer variable. The former is rooted in computer-mediated communication (CMC) and views interactivity as a process of concurrent two-way communication exchanges (Rafaeli, 1988), in which “messages in a sequence relate to each other, and especially the extent to which later messages recount the relatedness of earlier messages” (Rafaeli & Sudweeks, 1997, “Interactivity,” para. 2). Such a “contingency view” (Kalyanaraman & Sundar, 2008, p. 225) examines interactivity through mediated interactions among users (Sundar et al., 2003). The latter originates from human-computer interaction (HCI) and treats interactivity as a “product” (Stromer-Galley, 2004, p. 392) that enables users to interact with the system. This approach focuses on how different interactive interface features could impact users’ perceptions, attitudes and behavioral intentions (McMillan, 2002). Recently, scholars have also proposed a third definition of interactivity that examines interactivity from “the vantage point of the audience member or individual user – from a bottom-up perspective” (Bucy, 2004b, p. 376).

The key to the different approaches lies in where – the message, technology, or user – interactivity resides (Kiousis, 2002; Lee, 2000; McMillan & Hwang, 2002). Such a distinction leads to three unique conceptualizations – interactivity as a message-based variable (message contingency), a technological variable (technological attribute), or a conceptual/experiential variable (user perception). While each approach has its merits and constraints pertinent to specific research contexts (see Bucy, 2004b; McMillan, 2002), examining the psychological effects of interactivity requires treating interactivity as the independent variable; this is because the impact of which may or may not manifest as expected on users (Stromer-Galley, 2000; Sundar, 2004). Hence, the interactivity-as-attribute approach is the most appropriate for the current research to examine the cognitive effects of interactivity on website users.

Driven by a presumed positive role of interactivity (Bucy, 2004b), scholars have mostly found website interactivity effective in eliciting enjoyment and satisfaction, favorable attitudes, and desirable behavioral intentions across multiple contexts, including advertising, public relations, politics, health and journalism (see Yang & Shen, 2018). The presumption of a positive effect of interactivity, nevertheless, has encountered growing challenges as empirical evidence continued to accumulate regarding its negative impact on cognitions (e.g., Bos, Koolstra, & Willems, 2010; Bucy, 2004a; Jiang et al., 2010).

Website Interactivity and User Cognitions

In cognitive psychology, two qualitatively distinct modes of cognitive processing – unintentional and controlled – have been extensively explored (Posner & Snyder, 1975; Schneider & Shiffrin, 1977; Shiffrin & Schneider, 1977). Unintentional cognitive activities occur without awareness and attention through fast activation of the responses stored in long-term memory (Birnboim, 2003). Controlled cognitive processing, in contrast, requires individuals to consciously attend to, comprehend, elaborate, as well as restore into memory the information presented (B. Anderson, 2016, J. Anderson, 2015). As

Newhagen and Rafaeli (1996) put it, interactivity “engages users in cognitively effortful tasks and challenges them to be active” (p. 12). It transforms traditionally passive message recipients into active information initiators through reciprocal, concurrent two-way communications. In such a process, users are forced to switch from unintentional, unconscious automatic information processing to intentional, effortful controlled information processing (Sundar & Constantin, 2004).

The effects of controlled cognitive processing can be measured by different outcome variables such as knowledge, affect, attitude, intention, or actual behavior. In a meta-analysis of website interactivity, Yang and Shen (2018) examined the cognitive effects of interactive websites. However, their study examined cognition as a single outcome without distinguishing its multiple underlying dimensions. This study views cognition as a multi-dimensional concept and examines the impact of website interactivity on a range of cognitive responses including attention, comprehension, elaboration, memory, and knowledge gain (J. Anderson, 2015).

Cognitive Absorption. Attention, a cognitive process of selectively concentrating on certain objects while ignoring perceivable others (J. Anderson, 2015), is a key prerequisite for controlled cognitive processing (Birnbom, 2003). Scholars have frequently examined website interactivity in relation to attention, centering on the extent to which it can lead to users’ cognitive absorption – “total attention where all of an individual’s attentional resources were consumed by the object of attention” (Agarwal & Karahanna, 2000, p. 667). As websites become increasingly interactive, they can be effective in cognitively engaging and absorbing users (e.g., Fiore, Kim, & Lee, 2005; Jiang et al., 2010; Lu, Lin, Hsiao, & Cheng, 2010; Sicilia et al., 2005). When users are cognitively absorbed, they are psychologically immersed in their interactions with the technology with their full attention (Csikszentmihalyi, 2014). However, too much absorption can inhibit other cognitive processes like comprehension, elaboration, memory and knowledge gain (Fortin & Roy Dholakia, 2005; Noort, Voorveld, & van Reijmersdal, 2010; Sundar et al., 2016; Wu, Li, & Yeh, 2017). A high level of absorption can direct users’ limited attention away from the actual message (Reeves & Nass, 2000), leaving too few cognitive resources for deep information processing (Liu & Shrum, 2002).

Comprehension. Comprehension is the “receiver’s extracting the source’s intended meanings from the communication” (Jacoby & Hoyer, 1989, p. 435). As a crucial step to knowledge acquisition (Smith, 1975), comprehension determines the degree to which one could understand messages communicated (Macias, 2003). Researchers in the past have found that not only the content but also the structure of a message could impact its comprehension (Sundar et al., 2013). For example, by interacting with hyperlinks, users can navigate through interconnected layers of information, going through what structurally resembles the way our brains process information (Eveland & Dunwoody, 2001). Hence, interactivity could enhance website users’ message comprehension (Ding, 2016; Lustria, 2007; Macias, 2003).

However, others suggested that as interactive websites nowadays involve more than basic hyperlinks, the mechanisms through which they affect comprehension could be more complex and deserve further analyses (e.g., Bos et al., 2010; Bucy, 2004a).

Elaboration. Elaboration refers to “the extent to which a person thinks about the issue-relevant arguments contained in a message” (Petty & Cacioppo, 1986, p. 128). Building upon comprehension, elaboration reflects higher-order thinking and is a key to substantive knowledge gain (Thomas & Thorne, 2008). Elaboration manifests itself as the ability to generate relevant thoughts and fill in additional information pertaining to the existing messages. Hence, it has often been measured as thoughts users generated in response to the website information. There have been mixed results regarding how interactivity could affect elaboration. Some scholars have suggested that by navigating through in-text associative links, users are likely to interrogate the relevance of connected pages, thereby engaging in higher levels of elaborative processing of website information (Eveland & Dunwoody, 2002). However, this may not be true if users lack sufficient knowledge regarding the topic of the information (e.g., Calisir & Gurel, 2003), experience of using the Internet (Liu & Shrum, 2009), or the desire for control over their information processing (Liu & Shrum, 2002). Furthermore, users nowadays tend to make quick decisions online (Sundar et al., 2013), rendering the impact of interactivity on elaboration unclear (Eveland, Cortese, Park, & Dunwoody, 2004; Noort et al., 2010; Oh & Sundar, 2015; Schlosser, 2003; Sicilia et al., 2005).

Memory. Aside from comprehension and elaboration, memory is another essential cognitive component of knowledge gain. Referring to the storage and retrieval of information presented (Higbee, 2001), memory has been usually operationalized as recall and recognition (e.g., Xu & Sundar, 2016). Some found that users remembered more about traditional static ads than about interactive ads (Warnick et al., 2005), and they recalled fewer details about the news stories presented interactively (Sundar & Constantin, 2004). The simple linear structure of information presentation does not exist anymore on interactive websites, when users jump back and forth among pages as well as skipping and attending to only certain parts of a message as they wish. The potential of missing the whole story, as a result, could significantly reduce message recall and recognition (Kim & Stout, 2010; Stephens & Mottet, 2008; Sundar & Constantin, 2004).

Knowledge Gain. The ability to absorb information and transform it into one’s own knowledge is a key component of learning (Gross, 1996; Knowles, 1990). Knowledge acquisition involves all the cognitive concepts discussed above and technology has fundamentally reshaped how we achieve it. With the freedom to customize content and the pace of receiving content on interactive websites, users can actively tweak the learning environment until it best fits their learning abilities and styles. This can lead to more knowledge gain online (Courbet, Bernard, Joule, Halimi-Falkowicz, & Guéguen, 2016; Evans & Gibbons, 2007). Such an

assumption, nevertheless, may overestimate individuals' abilities to make proper decisions as to "how they can best learn, or even what they should learn" (Eveland et al., 2004, p. 211). Constant skipping and selecting content may exhaust users' limited cognitive resources (Kahneman, 1973; Lang, 2000) that ultimately fails to facilitate (Camerini & Schulz, 2012; Haseman, Nuipolatoglu, & Ramamurthy, 2002; Stephens & Mottet, 2008) or even hinders effective knowledge gain (Bos et al., 2010; Eveland & Dunwoody, 2002; Sun & Hsu, 2013).

Despite the hypothesized positive relationships between website interactivity and cognitive responses (e.g., Kim & Stout, 2010; Liu & Shrum, 2009; Macias, 2003; Tremayne, 2008), a considerable number of studies simply failed to find any significant results (Burgoon et al., 2000; Haseman et al., 2002; Schlosser, 2003; Stephens & Mottet, 2008). Some have revealed significant negative influence of interactivity particularly on knowledge gain (Bos et al., 2010; Bucy, 2004a; Eveland et al., 2004; Lee & Shin, 2012; Seal, Przasnyski, & Leon, 2010; Sundar & Constantin, 2004; Warnick et al., 2005). The goal of the present study is, therefore, to untangle these conflicting findings and examine how website interactivity affects each stage of users' cognitive process.

Potential Moderators

Aside from the above-mentioned key cognitive concepts, prior research has also identified several contingent conditions that could moderate the degree to which website interactivity affects user cognitions.

Operationalization of Interactivity. As a technological attribute, interactivity facilitates both user-to-user and user-to-system communication through three different dimensions: modality, message, and source (Sundar, 2007). Modality interactivity refers to the format of message presentation (e.g., text, audio, video) (also see Burgoon et al., 2000). Through various modalities such as audio, video, 3D display and 360-degree view, users get to interact with multiple parts of a website. Message interactivity is the degree to which a message from a system or a user is contingent upon another message (Sundar et al., 2016). For example, when clicking through hyperlinks, website users provide input based on the output from the system. Similarly, when chatting with others on a website, users can interact with each other back and forth. Source interactivity refers to the extent to which a user can serve as the source for content primarily by personalization and customization. In giving users the freedom to control information online, source interactivity represents the very essence of interactivity. As the three dimensions cover distinct aspects of interactivity, they could also trigger different cognitive reactions among website users.

Level of Interactivity. Besides the above-mentioned types of operationalizations, the level of interactivity manipulated or measured in each study can be another significant moderator. While some studies suggest the impact of website interactivity grows as the level of interactivity increases (Fortin & Roy Dholakia, 2005; Xu & Sundar, 2014), others argue that extremely high levels of interactivity could overwhelm users and cause considerable cognitive overload (Ariely, 2000; Bucy, 2004b; Liu & Shrum, 2002). By manipulating interactivity at three levels, scholars have found an inverted V-shaped curvilinear relationship between website interactivity and its benefits (Sundar, 2007; Xu & Sundar, 2016). That is, the desired outcomes of interactivity would initially increase until it reaches an optimal point, after which additional increases in the level of interactivity could cause negative consequences.

Type of Websites. How website interactivity could affect user cognition also depends on the website type. Previous studies, in general, have shown desirable effects of interactivity for experiential websites that are designed to offer fun and enjoyable experiences like shopping, networking, or traveling (Fiore et al., 2005; Fortin & Roy Dholakia, 2005; Jiang et al., 2010; Sicilia et al., 2005). When users view a product from different angles, such a shopping experience is significantly more engaging than reading a plain description of the product. For informational websites designed for news (Bucy, 2004a; Sundar & Constantin, 2004), political/health campaigns (Lee & Shin, 2012; Lustria, 2007) or education (Evans & Gibbons, 2007; Seal et al., 2010), however, their primary focus is to deliver information to the audience. Excessive interactive features on these websites might be cognitively taxing and distracting.

Research Expectations

In light of the varying findings reported earlier, we expect that interactivity might not always be beneficial to comprehension, elaboration, memory, and knowledge gain. But it will be positively associated with cognitive absorption. In addition, given the moderators identified in prior studies, we also expect that the extent to which website interactivity affects user cognitions would vary by different operationalizations and levels of interactivity, and types of websites.

Methods

Search Process and Sampling Frame

To identify relevant studies for our analysis, we searched multiple databases – ABI/INFORM, ACM Digital Library, Communication and Mass Media Complete, EBSCO, Google Scholar, JSTOR, ProQuest, PsycINFO, PubMed, SpringerLink, SAGE,

ScienceDirect, and Web of Science. We searched these databases using the term “interactivity” in combination with each of the following keywords: website, cognition, comprehension, elaboration, recall, recognition, absorption, involvement, learning, and knowledge. We also checked reference lists of review articles on interactivity (e.g., Kiousis, 2002; Rafaeli & Ariel, 2007) to ensure that our search process did not miss any relevant studies.

All papers chosen for the meta-analysis must meet the following inclusion and exclusion criteria. First, a study should have investigated the effects of website interactivity on cognitive absorption, message comprehension, elaboration, memory, or knowledge acquisition. Second, a study must be experimental research whereby interactivity has been manipulated or measured, in order to analyze the effects of interactivity. Last, in order to conduct a meta-analysis and compute the effect sizes, studies selected must have the necessary statistics such as means, mean differences and standard deviations (Borenstein, Hedges, Higgins, & Rothstein, 2009). Using the above criteria, we identified a total of 37 studies that met all the inclusion criteria and subsequently included them in the final sample for this meta-analysis.

Treatment of Dependent Variables

The focus of this meta-analysis is cognitive outcomes of website interactivity including cognitive absorption, message comprehension, elaboration, memory, and knowledge gain. In addition, we also computed an overall index that combines all individual outcome variables to examine the overall cognitive effects of interactivity. This is similar to the procedure used in prior meta-analytic research (see O’Keefe & Jensen, 2009; Shen, Sheer, & Li, 2015).

Classification of Moderating Variables

Operationalization of Interactivity. According to Sundar (2007), modality interactivity is the richness of message presentations. Therefore, studies that operationalized interactivity as interactive functions available on websites were classified as modality interactivity. Message interactivity means contingent input and output of messages through interactive features like hyperlink and chat room. Studies that manipulated or measured interactivity from the perspective of message contingency were thus treated as message interactivity. Source interactivity refers to website users serving as the source of website content. Studies that operationalized website interactivity from this approach (e.g., personalization and customization) were, therefore, considered as source interactivity.

Level of Interactivity. The level of interactivity was identified according to how interactivity was manipulated or measured in each study. Some studies tested the

effects of website interactivity by manipulating interactivity at either two levels (no interactivity versus interactivity, or low versus high interactivity) or three levels (low versus medium versus high interactivity). Other studies measured interactivity and treated it as a continuous variable. For studies with three manipulated interactivity levels, we selected only the low-versus-high levels for comparison purposes.

Type of Websites. Previous literature suggested that experiential websites are designed to offer website users recreational services such as shopping, gaming, and traveling (e.g., López & Ruiz, 2011). Conversely, informational websites are those created for education, campaigns, or hard-news reporting (e.g., politics, science, international events, etc.) with an aim to inform the public (Reinemann, Stanyer, Scherr, & Legnante, 2012). While it is true that shopping is not always recreational, the interactive shopping websites included in this meta-analysis were specifically designed for the purpose of engaging and involving users (e.g., Dholakia & Zhao, 2008; Liu & Shrum, 2009; Macias, 2000, 2003; Xu & Sundar, 2014). Therefore, they were coded as experiential websites. Likewise, the news websites analyzed in this meta-analysis were exclusively about politics, science, international events with the goal of informing rather than entertaining users. Hence, they were coded as informational websites.

Two coders coded the moderators of eight randomly selected papers (about 20% of the entire dataset). All the discrepancies were discussed and then revised until satisfactory inter-coder reliability (Cohen's Kappa > .80) was achieved (Cohen, 1960). Then the same two coders coded the rest of the 29 studies. For the three moderators coded, the inter-coder reliability is satisfactory for the operationalization of interactivity ($K = .87$), level of interactivity ($K = 1$), and the type of websites ($K = .84$).

Computation of Effect Size

The unit of analysis for effect size is an experimental pair, which is the comparison of means between a condition with a lower level of interactivity and another condition with a higher level of interactivity. The 37 studies generated a total of 108 experimental pairs. We used the analytical tool Comprehensive Meta Analysis (CMA) to compute the effects sizes. Statistics of comparable formats including correlations, means with standard deviations, p -values and sample sizes reported in each study were identified and then converted into one uniform set of metrics: correlations (r), p values, and Q statistics, as suggested by Borenstein et al. (2009). The r is the indicator of an effect size and was converted into the standardized mean difference (d) for comparing effect sizes. The Q statistic tests the significance of between-group differences. The between-subjects and within-subjects designs were entered, using separate formats in CMA to account for the design differences.

Results

This research examines the cognitive effects of website interactivity by computing the correlations (r 's) for all experimental pairs based on the random-effects model. As studies included in this meta-analysis are from different researchers, the measurement and sample variations of the selected studies indicate a range of distributions of the estimated correlations. The random-effects model is, therefore, preferred to the fixed-effects model (Borenstein et al., 2009). Table 1 lists the effect sizes, sample sizes, the key outcome variables, and moderating variables for all studies. Effect sizes and other basic statistics of all studies by the three moderating variables are reported in Table 2.

When all of the cognitive outcomes are considered altogether, interactivity has a significant but small positive overall cognitive effect, $r = .138$, $p < .01$. When converted into the standardized mean difference, the r -value equals a d -value of .282 ($p < .001$), suggesting that interactivity has a small-to-moderate-size cognitive effect on website users, according to Cohen's (1992) classification. More importantly, while website interactivity significantly help absorb users' attention ($r = .179$, $p < .001$, equal to a d -value of .361, $p < .001$), it does not significantly enhance comprehension ($r = .200$, $p = .14$), elaboration ($r = .061$, $p = .13$), memory ($r = .017$, $p = .80$), or knowledge gain ($r = .077$, $p = .26$).

Contrary to our expectation, the operationalization of interactivity does not moderate the cognitive effects of website interactivity. While message and modality interactivity have slightly larger impact on user cognition ($r = .157$, $p < .01$, $d = .314$, $p < .01$, and $r = .145$, $p < .05$, $d = .291$, $p < .01$, respectively) compared to source interactivity ($r = .129$, $p = .13$), the difference is not significant ($Q = .263$, $p = .97$). With that said, a significant moderation effect of the level of interactivity was obtained, with significant between-group difference ($Q = 10.376$, $p < .05$). When manipulated or measured at two levels (i.e., non-interactivity versus interactivity, or low versus high interactivity) or at the continuous level, website interactivity has significant effects on cognition with a moderate-size effect for the two-level interactivity ($r = .162$, $p < .05$, equal to a d -value of .339, $p < .01$) and a moderate-size effect ($r = .196$, $p < .001$, equal to a d -value of .396, $p < .001$) for the continuous-level interactivity. However, when manipulated at three levels (low/medium/high interactivity), its impact is negligible, $r = .056$, $p = .44$.

Website type also emerges as a significant moderator, $Q = 5.748$, $p < .05$. Specifically, interactivity has a significant cognitive effect for experiential websites ($r = .210$, $p < .01$, equal to a d -value of .435, $p < .001$) with a moderate effect size. However, for informational websites, interactivity fails to significantly influence user cognition, $r = .033$, $p = .38$.

Table 1
Effects of Interactivity on Message Comprehension, Elaboration, Memory, Knowledge Gain, and Its Overall Effects on User Cognition

	Operationali- -zation	Level	Web- site	Compre -hension			Memory			Knowledge Gain			Cognitive Absorption			Cognition
				r	r	r	r	r	r	r	r	r	r	r	r	
Bos, Koolstra, & Willems (2010)	MD	L/M/H	I	273	-.276***					-.049						-.164*
Bucy (2004a)	S	N/Y	I	73	-.189*											-.189*
Burgoon et al. (2000)	MD	L/M/H	E	70	.031											.031
Camerini & Schulz (2012)	MD	L/M/H	I	165						.000						.000
Courbet, Bernard, Joule, Halimi-Falkowicz, & Guéguen (2016)	S	N/Y	E	388					.369***	.383***						.376***
Ding (2016)	MD	L/H	E	90	.836***											.836***
Evans & Gibbons (2007)	MS	N/Y	I	33						.059						.059
Eveland, Cortese, Park, & Dunwoody (2004)	MS	N/Y	I	172			.077		-.122	-.001						-.012
Fiore, Kim, & Lee (2005)	MD	L/H	E	103									.346***			.346***
Fortin & Roy Dholakia (2005)	MD	L/M/H	E	360									.204**			.204**
Gupta, Nadkarni, & Gould (2005)	MD&MS	C	E	162									-.069			-.069
Haseman, Nuipolatoglu, & Ramamurthy (2002)	MD&S	L/M/H	I	153						.079						.079
Jiang, Chan, Tan & Chua (2010)	MS&S	L/H	E	186									-.059			-.059
H. Kim & Stout (2010)	MS	L/H	I	113	.500***											.268***
E. Lee & Shin (2012)	MS	L/H	I	264			.030		.000				.055			.007
Liu & Shrum (2009)	MD	L/H	E	80			.106		-.133*							.106
Lu, Lin, Hsiao, & Cheng (2010)	MD&MS&S	C	E	586									.160***			.160***
Lustria (2007)	MS	L/H	I	441	.062											.062
Macias (2000)	MD	L/H	E	153	-.029											-.029
Macias (2003)	MD&MS	L/H	E	153	.214*											.214*
Noort, Voorveld, & van Reijmersdal (2010)	MD	L/H	E	66	.113				.073				.480***			.154
Oh & Sundar (2015)	MD&MS	L/M/H	I	167			-.019						.164*			.059

(continued)

Table 1
(Continued)

	Operationali- -zation	Level/	Web- site	N	Compre -hension		Memory	Knowledge		Cognitive	
					r	r		Gain	Absorption	r	r
Roy Dholakia & Zhao (2008)	MD	L/H	E	270					-.010		-.010
Schlosser (2003)	MD	N/Y	E	75							-.024
Seal, Przasnyski, & Leon (2010)	MD	L/M/H	I	40				.135			.135
Sicilia, Ruiz, & Munuera (2005)	MS	N/Y	E	108	.175	.247**			.169		.192*
Stephens & Mottet (2008)	MS	L/H	I	75				-.171			-.171
Sun & Hsu (2013)	MD	L/M/H	I	42				.233			.233
Sundar & Constantin (2004)	MD	L/M/H	I	14			.046				.046
Sundar et al. (2010)	MD	L/M/H	I	46			-.016		.235		.069
Sundar, Bellur, Oh, Jia, & Kim (2016)	MS	L/M/H	E	110					.361*		.361*
Tremayne (2008)	MS	N/Y	I	71	.340**						.340**
Warnick, Xenos, Endres, & Gastil (2005)	MS	C	I	351			-.326				-.326
Wu, Li, & Yeh (2017)	MS&S	L/H	E	320					.432***		.432***
Wu, Wang, Wei, & Yeh (2013)	MS&S	L/H	E	141					.151		.151
Xu & Sundar (2014)	MD	L/M/H	E	186					.327***		.327***
Xu & Sundar (2016)	MD	L/M/H	E	186			-.042		.043		-.013
Mean Correlation				6286	.200	.061	.017	.077	.179**		.138**

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. Effect size calculations were based on the random-effects model. MD = modality interactivity; MS = message interactivity; S = source interactivity; C = continues level of interactivity; N/Y = no interactivity vs. interactivity; L/H = low vs. high interactivity; L/M/H = low vs. medium vs. high interactivity; E = experiential websites; I = informational websites; N = sample size.

Table 2
Moderation Effects of the Operationalization of Interactivity, Level of Interactivity, and Type of Websites on the Cognitive Effects of Website Interactivity

	k	r	Q
<i>Operationalization of Interactivity</i>			0.263
Modality	49	.145*	
Message	36	.157*	
Source	9	.129	
<i>Level of Interactivity</i>			10.376*
Continuous	7	.196***	
Low/High or No/Yes	71	.162***	
Low/Medium/High	30	.056	
<i>Type of Websites</i>			5.748*
Experiential	64	.210**	
Informational	44	.033	

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. Effect size calculations were based on the random-effects model. k = number of experimental pairs. Low/High or No/Yes included studies that had low vs. high interactivity, and non-interactivity interactivity vs. interactivity, respectively. Low/Medium/High included those that had three levels of interactivity, only two of which (low vs. high) were included for analysis.

Discussion

This meta-analysis contributes to the existing literature by systematically analyzing the cognitive effects of website interactivity and its associated moderators. While interactivity has become an expected website characteristic, this meta-analysis suggests that its benefits are not universal. Although interactive websites can significantly attract and absorb users online, they may not necessarily improve information comprehension, elaboration, memory, and knowledge acquisition. Such a discrepancy, as suggested in prior literature, can be explained by the limited capacity theories (Kahneman, 1973; Lang, 2000). Dealing with interactive features requires considerable attention and cognitive effort, potentially leaving very little for users to effectively process the information presented on websites. This is particularly the case, considering how sophisticated interactive websites have developed with many ever-evolving functions to engage the human sensory system.

This meta-analysis has not found a significant negative cognitive effect of website interactivity revealed in early studies (e.g., Bucy, 2004a; Liu & Shrum, 2002). The non-significant impact of website interactivity on user comprehension, elaboration, memory, and knowledge gain suggests that not all website users benefit from interactive websites, possibly due to individual differences. For example, users with lower levels of

need for cognition have been found especially susceptible to the undesirable consequences of website interactivity (Sicilia et al., 2005; Wu et al., 2017). Being cognitively absorbed usually means full utilization of one's attention and cognitive bandwidth—even to the point of cognitive depletion—especially for those with low need for cognition (Sicilia et al., 2005; Wu et al., 2017). Users can easily get confused, disoriented, and frustrated when trying to navigate through various fancy interactive functions without proper instructions (Bos et al., 2010; Eveland & Dunwoody, 2002; Sun & Hsu, 2013), sufficient Internet experience (Liu & Shrum, 2009), or ideas of what they really want (Eveland et al., 2004).

Message, modality, and source interactivity do not significantly differ from each other regarding their cognitive impact. This is probably because website users are required to devote a considerable amount of cognitive efforts regardless the actual type of interactions – back-and-forth message exchanges, multimedia message presentations, or content customization – with which they are involved online. For example, scholars have long noticed the ability of vivid images (modality interactivity) in attracting website users' attention (Oh & Sundar, 2015; Sundar et al., 2010). Likewise, the contingent message exchanges (i.e., message interactivity) also demand users' cognitive recourses, for individuals must process the information received previously in order to provide feedback in return (Eveland et al., 2004). Similarly, navigating through various interactive functions to customize website content (source interactivity) also takes up considerable cognitive resources from users (Sundar, 2007).

This meta-analysis identifies a curvilinear relationship between website interactivity and its benefits (Sundar, 2007). The positive association between cognition and website interactivity at two levels (non-interactivity versus interactivity, or low versus high interactivity) disappears, when an even higher degree of interactivity is added as the third level (i.e., low versus medium versus high interactivity). This is perhaps due to the fact that too much interactivity will significantly overload users, who only have limited cognitive capacities (Liu & Shrum, 2002; Warnick et al., 2005). Interestingly, our meta-analysis also reveals a significant positive effect for the continuous-level website interactivity on user cognitions. However, this ostensibly linear pattern is likely an artifact of a presumed linear effect in the studies that measured interactivity at the continuous level. These studies, with such a presumption, fitted a linear regression model to test the effects of interactivity, thereby obscuring the non-linear relationship between website interactivity and its utility. One exception found in our meta-analysis is Gupta et al.'s (2005) study, which fitted a non-linear model to test the effects of interactivity. The results revealed its impact flipped from positive to negative as the level of interactivity increased.

Our analysis also confirmed that the extent to which interactivity could affect user cognitions varies by different types of websites. For experiential websites, being interactive can be advantageous, as interactivity can effectively involve and engage users who seek fun experiences from these websites (Fiore et al., 2005; Lu et al., 2010; Dholakia & Zhao, 2008; Sicilia et al., 2005). Nevertheless, being engaged by interactive websites does not necessarily mean gaining knowledge from these

websites. Interactivity, as shown in this study, might not be beneficial for informational websites, due to its non-significant effects on comprehension, elaboration, memory and knowledge gain, all of which are key outcomes for websites designed to educate rather than entertain (Bucy, 2004a; Evans & Gibbons, 2007; Lee & Shin, 2012).

Despite the increasing number of studies devoted to interactivity research, none thus far have systematically examined how users' different cognitive activities – cognitive absorption, comprehension, elaboration, memory, and knowledge gain – could change as a result of using interactive websites. Furthermore, this study reveals the nuanced cognitive effects of website interactivity, by identifying the moderators that could significantly enhance or limit its influences on user cognitions. Findings of this research help us gain a deeper understanding of the role played by interactive technologies in our daily information search and decision-making processes.

Our findings have several important practical implications as well. First, although website interactivity has been long deemed desirable and beneficial (see Bucy, 2004b), findings of this research suggest a much more nuanced story. While users' attention can be effectively grasped by interactive websites, such engagement does not necessarily result in knowledge acquisition. Website designers should carefully differentiate between an experiential and informational website (i.e., experiential or informational). If a website is mainly created for the purpose of engaging and entertaining users, interactivity can be beneficial. However, if a website is for information sharing and education, incorporating highly interactive features might not lead to anticipated outcomes.

It is also important to manage the degree of interactivity because extremely high levels of interactivity might not be helpful to users. Unfortunately, there is no one-size-fits-all solution to know "how much is too much" as interactivity rests upon people's subjective perceptions (Bucy & Newhagen, 1999; Hwang & McMillan, 2002; McMillan, 2000). A combination of hyperlinks, email function, and a "frequently asked question" page would be perceived as highly interactive for a science education website (e.g., Bos et al., 2010), but it probably will not be considered the same for an e-commerce website (e.g., Xu & Sundar, 2016). More user experience research, therefore, is needed to identify the optimal degrees of interactivity preferred by website users.

This study is not without limitations. First, although an exhaustive search was made to search for all relevant studies, some papers might have been missed (e.g., unpublished dissertations and theses). Due to the limited numbers of studies available, we were not able to examine how the moderating variables may change the effects of interactivity on each dimension of user cognitions. Likewise, limited by the number of available studies, this meta-analysis was not able to explore the moderation effects of certain individual differences (e.g., computer skills, need for cognition, or gender) that could also change the way users react to interactive websites. Future research should include individual characteristics to provide a more nuanced understanding of the relationship between website interactivity and user cognitions.

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Do You Enjoy TV, while Tweeting? Effects of Multitasking on Viewers' Transportation, Emotions and Enjoyment

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Do You Enjoy TV, while Tweeting? Effects of Multitasking on Viewers' Transportation, Emotions and Enjoyment

Suji Park, Xiaowen Xu , Brenda Rourke, and Saraswathi Bellur

The present study seeks to extend the extant body of work on media multitasking by examining the impact of second screen use (tweeting while watching television) on transportation into a narrative and enjoyment of a TV sitcom, mediated through affective experiences. In a between-subjects experiment, participants watched a TV show with or without tweeting about it. The findings support the assumption that media multitasking decreases people's experience of transportation, which then impairs their emotional responses; reduced emotions further decrease enjoyment of the show. However, trait empathy does not moderate the impact of concurrent TV-viewing and tweeting.

With the development of new media technology, second screen use has flourished. TV watchers, besides exposure to the TV screen, also interact with other users about the TV content on their cell phone or tablets as a "second screen" (Doughty, Rowland, & Lawson, 2012).

Previous research reported that over half of TV viewers between ages of 18 and 24 use a second screen web-connected device for engaging social media to discuss what they are viewing on TV (Advanced Television, 2012; King, 2012; Pynta et al., 2014). As social media, especially Twitter, have become a key platform for further

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Color versions of one or more of the figures in the article can be found online at www.tandfonline.com/hbem.

disseminating media content and catalyzing interactions among viewers, TV shows actively initiate social media interactions among online viewers by promoting discussion about the show's topic in real time (McPherson et al., 2012). This form of second screen use, called "live-tweeting," has gained increasing popularity.

Research on media multitasking has focused mainly on cognitive and learning effects (Bellur, Nowak, & Hull, 2015; Lawson & Henderson, 2015). More recent studies have paid attention to the impact of multitasking on psychological and emotional responses to mediated experiences (Jeong & Hwang, 2016; Lang & Chrzan, 2015; Oviedo, Tornquist, Cameron, & Chiappe, 2015); however, none of these studies have scrutinized how live-tweeting, while watching a TV show impacts viewers' cognitive state and emotional responses. In addition, there are very few studies that have explored the effects of potential mediating and/or moderating factors. Therefore, this study aims to fill these gaps by examining how live-tweeting affects audiences' overall media enjoyment, via self-reported transportation and emotional responses. Further, we probe whether these relationships are moderated by viewers' trait empathy.

Literature Review

Media Multitasking

Lang and Chrzan (2015, p. 100) defined media multitasking as "doing two tasks simultaneously, one of which involves media use." While multitasking, individuals may switch their attention from one task to another, and are often engaged only partially with each task (Bellur et al., 2015). Using technology as a secondary task—while being engaged in an unrelated primary task—can tax one's cognitive resources, and distract individuals from the main task that requires deep mental engagement (Wang & Tchernev, 2012).

While many studies have focused on the negative impacts of media multitasking on cognitive outcomes (Hassoun, 2015; Van Cauwenberge, Schaap, & Van Roy, 2014), the effects of multitasking on audiences' enjoyment of media content have been inconsistent (Bernhaupt, Guéron, Manciet, & Desnos, 2015; Dolbin, 2015). For instance, a previous study examining multi-window multitasking (TV commercials and additional tasks) found a positive impact on enjoyment (Chinchanchokchai, Duff, & Sar, 2015). On the other hand, Rubenking (2017) found that those multitasking experienced less enjoyment than those doing a single-task, when the primary screen content was neutral (compared to positive or negative messages). Thus, the type of media (e.g., TV, computer screens, tablets, etc.), along with the content of the primary task (positive, negative or neutral) can lead to divergent findings.

Other studies have examined factors such as need for relatedness (Deci & Ryan, 2000), which contributes to an increase in media enjoyment (Tamborini, Bowman,

Eden, Grizzard, & Organ, 2010). Specifically, research has suggested that users' satisfaction of both extrinsic (social pressure) and intrinsic (competence and relatedness) needs can account for the use of social media and its effects on enjoyment, as it relates to Facebook use (Reinecke, Vorderer, & Knop, 2014). Similarly, people who simultaneously watch a show and tweet about it may have increased enjoyment, due to the satisfaction of the need for relatedness via Twitter use. However, it is also likely that people attribute this enjoyment to the secondary task (i.e., Twitter use), rather than the primary task (i.e., TV-viewing). Thus, individuals are likely to negatively evaluate the primary screen use, when the secondary task offers more positive social and psychological gratifications. This negative evaluation of the primary task could be further exacerbated by the inability to be fully engaged in the primary entertainment medium, as a result of being distracted with secondary-screen use (Bayer, Dal Cin, Campbell, & Panek, 2016).

Unlike multitasking effects focusing on TV commercials (i.e., Chinchanchokchai, Duff, & Sar, 2015; Segijn, Voorveld, & Smit, 2016), multitasking of TV-viewing and other medium use may result in lower enjoyment of the TV content, as TV shows often contain a stronger narrative than TV commercials. For example, previous studies found that people watching a TV show while using social media or the Internet enjoyed the show less than only watching the show (Oviedo et al., 2015; Rubenking, 2017). TV narratives may require greater cognitive resources than TV commercials. Thus, people who simultaneously watch a TV show and tweet about it, may find tweeting to be distracting, and in turn, focus less on the narrative. Eventually, they may enjoy the show less than those solely watching it.

H1: Concurrent TV-viewing and tweeting will lead to lower enjoyment of TV-viewing.

Transportation Theory

Many researchers have attempted to explain how narratives of entertainment successfully draw audiences' attention (Green, Brock, & Kaufman, 2004; Nabi & Krcmar, 2004). Transportation refers to "a distinct mental process, an integrative melding of attention, imagery, and feelings" (Green & Brock, 2000, p. 701). People find mediated experiences enjoyable when they are immersed in the narratives of the media and experience a temporary escape from reality (Green & Brock, 2002; Green et al., 2004). Green and Fitzgerald (2017) observe that what makes transportation different from related concepts such as "flow" (Csikszentmihalyi, 1990) or "presence" (Lombard & Ditton, 1997) is that with transportation, individuals report being immersed specifically into a *narrative*. Whereas with "flow" or "presence," transportation is more of an experiential state that is not tied to a specific narrative, but rather, it refers to the overall experience of being engaged in a skillful activity or

the perceptual illusion of being elsewhere, respectively. When individuals are transported into a narrative, their mental resources are fully employed to concentrate on a narrative, and this enables them to be completely absorbed by it (Tal-Or & Cohen, 2010).

It is worth noting that external factors may impede the experience of transportation (Green et al., 2004). Any stimuli that act as a distraction and draw people's attention from a narrative can hinder the users from being immersed in the narrative. Engaging in a secondary screen while consuming a narrative-based medium could have the same effect (Green et al., 2004). If complete absorption in the primary screen is not accomplished because of a secondary screen, users are likely to experience a lower sense of transportation into the narrative (Green et al., 2004). Therefore, the following hypothesis is proposed:

H2: Concurrent TV-viewing and tweeting will lead to lower transportation.

Emotion and Enjoyment

Previous research has argued that people engage in multitasking because it produces positive responses, though it may diminish cognitive attention to the tasks (Wang & Tchernev, 2012). However, transportation theory states that transported people experience greater levels of emotions—regardless of the valence—than those less transported. Thus, we believe that multitasking involving simultaneous TV and Twitter use may reduce emotional responses to a TV show. We attribute this to tweeting being a distracting factor that diminishes transportation into the TV show. For instance, Oviedo et al. (2015) reported that participants felt stronger negative emotions and lower overall enjoyment, if they interacted with *Facebook* friends while watching TV (dual-tasking), compared to those only watching the program (single-task). While there are inconsistent findings on the relationship between media multitasking and the valence of emotions, there does seem to be a consensus that multitasking does evoke significant emotional responses. Thus, based on transportation theory, we hypothesize that,

H3: Concurrent TV-viewing and tweeting will lead to lower levels of emotional responses related to the TV show.

Transportation and emotions play pivotal roles in media entertainment (Green et al., 2004), but the link between media multitasking and enjoyment mediated by transportation and emotions has not been clearly investigated. Nevertheless, researchers have independently examined segments of this causal process (e.g., Chuang, Sparks, Gardner, & Bradley, 2012; Visch, Tan, & Molenaar, 2010). For instance, a study showed that participants reported a greater degree of emotional

elevation of both positive and negative valence when experiencing heightened transportation (Murphy, Frank, Moran, & Patnoe-Woodley, 2011). Importantly, transportation and emotional responses after media use may not operate simultaneously. Mahood and Hanus (2017) revealed an indirect process where emotional experience of guilt was intensified, as a result of transportation. Similarly, transportation into a TV show that is hindered by distraction of secondary screen use, may negatively impact emotional responses to the TV show. This, in turn, could affect adversely affect overall enjoyment.

Though media enjoyment is typically characterized by positively valenced emotions, the notions of enjoyment and positive emotions are not identical. Enjoyment is the primary response of audiences that comprehensively captures the entertainment experience (Oliver & Bartsch, 2011). Oliver (1993) argued that enjoyment may be derived from any emotions when they are evaluated as appropriate responses to a stimulus, even though the face value of some emotions is not enjoyable, such as sadness. For example, viewers are likely to enjoy a TV sitcom if they experience social emotions, such as sympathy and pity, and if they appreciate the feelings as appropriate reactions. Hence, it is important to consider a wide variety of emotions, including social and negative emotions, as well as positive emotions, when examining media enjoyment.

In sum, compared to those engaged in media multitasking, people consuming only one medium are more likely to experience greater transportation into a narrative of the content, which in turn, leads to more intensified emotions. An increase in emotions may result in greater enjoyment. Thus, the current study hypothesizes a sequential indirect effect such that people who watch a TV sitcom and tweet about the show simultaneously are (i) less likely to be transported into the show, (ii) and subsequently, have weak emotional responses to the show. Further, as a result of these reduced emotions, (iii) they are less likely to appreciate the show as being enjoyable.

H4: Concurrent TV-viewing and tweeting will lead to lower levels of transportation, which in turn, will result in lower levels of emotional response. Subsequently, this will lead to lower enjoyment of TV-viewing.

Trait Empathy

Trait empathy is the capacity of an individual to feel or experience the emotional state of others (Clark, 1980; Davis, 1980). Past research has proposed a moderating role of empathy in how it conditionally impacts the effects of media on transportation, emotions and enjoyment (Hall & Bracken, 2011; Hartmann, Toz, & Brandon, 2010). Degree of empathy has an effect on transportation in such a way that, an individual who is more likely to feel empathy for

fictional characters, tends to be more transported into the story (Taylor, 2015). Additionally, previous researchers have empirically supported the role of empathy as a moderator in explaining the effects of media exposure on individuals' responses (Hartmann et al., 2010).

While prior research has examined the conditional effects of empathy on media enjoyment in single-tasking contexts, it is not yet clear how this moderation works when individuals are engaged in secondary-screen use. It can be argued that highly empathic people are more likely to be transported into a narrative—regardless of whether they multitask or not—due to their greater ability to be immersed into a narrative. However, those low in empathy may have trouble being transported and experiencing subsequent emotional responses, if they are also simultaneously engaged in another medium or activity. We examine whether this indirect effect of concurrent TV-viewing and tweeting on enjoyment via transportation and emotions is conditional upon individuals' trait empathy levels. Due to the lack of previous empirical evidence, we test this moderated mediation via the following research question:

RQ1 : Is the association between concurrent TV-viewing and tweeting on enjoyment (via transportation and emotions) moderated by empathy?

In sum, live-tweeting while watching TV will have not only a direct impact but also an indirect impact on enjoyment of the TV show via transportation and emotions, successively. Concurrent TV-viewing and tweeting will also result in a decrease in transportation and emotions. In addition, empathy is likely to moderate the sequential impact of multitasking on enjoyment via transportation and emotions.

Methods

Sample

Participants were recruited from a large northeastern university through convenient sampling technique. Students from two communication courses participated in this study. After removing 57 incomplete responses and successful manipulation check, 230 responses were retained in the final sample (Control = 140, Experiment = 90). The average age of these participants was 19.20 ($SD = 1.81$); the sex split was 41.7% males. The sample consisted of mostly Caucasians (62.6%), followed by Asians (15.7%), African Americans (9.6%), Hispanics (6.5%), and other ethnicities (5.6%).

Design

The experiment is a post-test only, between-groups design with two conditions: watching a show (control) or tweeting while watching the show (experiment).

Procedure and Stimulus

Participants in both the experimental and the control conditions were invited to the laboratory and were instructed to bring a portable electronic device with them to participate in the study. Participants were randomly assigned to either the experimental or the control condition. After expressing informed consent via signing a consent form, participants completed a questionnaire on their own electronic devices, which included questions about demographics and measures of empathy.

The participants in both conditions watched an episode from the TV show *Friends* as a small group (on average 5–8 participants) in each session. Participants in the experimental (multitasking) condition were asked to download the Twitter app on their own electronic devices and familiarize themselves on composing and sending tweets before participating. Participants were informed that they would use their personal Twitter accounts for the study. They were also asked to send at least five tweets about the show, while they were watching the show. These tweets were posted to an ad-hoc fan page for the show, specifically created for this experiment.

The left 3/5th of the projector screen showed the TV episode; the right 2/5th displayed tweets participants sent, with *TweetDeck*, a tool that continuously displayed all tweets sent in real-time. Participants could see their own tweets and others' tweets in the same experiment session. As they were asked to tweet their own thoughts about the show, the content of the tweets differed in each session. After each experimental session, all tweets were deleted to ensure confidentiality of their Twitter accounts. Participants in the control condition watched the same episode on the left 3/5th of the screen, without being asked to tweet. The other 2/5th of the screen in the control condition was left blank. Please see [Figure 1](#) for an illustration of the experimental manipulation and set-up.

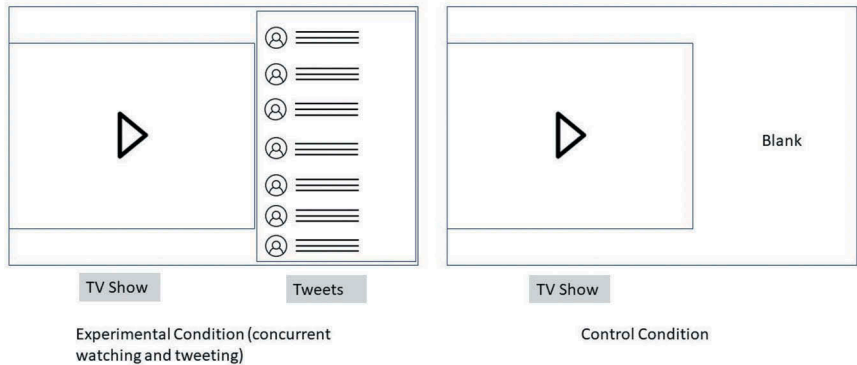
At the completion of the episode, all participants were asked to answer questions on transportation, emotions, and enjoyment. Their previous viewing experience of *Friends* and the episode were used as control variables.

Measures

Manipulation Check. The manipulation of the experimental condition was checked by asking participants whether they were allowed to use electronic devices while watching the show. Participants replying “yes” to this question were also asked how many tweets they sent ($M = 4.98$, $SD = 2.09$).

Concurrent TV Viewing and Tweeting. The number of participants in each session varied due to attrition and data collection format (i.e., participants assigned to conditions in small groups, anticipated “no shows”, and the timing of the academic semester). This resulted in unequal sample sizes for the control and experimental group. Thus, to take into account the unequal number of participants

Figure 1
Illustration of Experiment Conditions



across conditions, weighted effect coding was used (Cohen, Cohen, West, & Aiken, 2003; Experiment = - 1.56, Control = 1). Further, we adopted Welch's t-test to compare group means, which accounts for unequal cell sizes and variances (Delacre, Lakens, & Leys, 2017; Ruxton, 2006).

Transportation. Transportation was measured with six items adapted from Green and Brock (2000) and Jennett et al. (2008). Items include "To what extent did you feel as though you were separated from your real-world environment" and "To what extent were you interested in seeing how the show's events would progress?" (1 = Never to 5 = All the time; $\alpha = .85$).

Emotion. A series of ten discrete emotions (Strizhakova, Kang, & Buck, 2007) were modified and included to measure the range of affective responses that participants felt toward the show. Participants were asked "Please indicate the feelings that you experienced while watching the show," measured on a seven-point scale (1 = Never to 7 = Always). An Exploratory Factor Analysis with principal component analysis and varimax rotation was conducted. The results showed a three-factor solution: 'positive emotion' (happy, love, interested; $\alpha = .73$), 'negative emotions' (anger, aggressive, hatred, resentful; $\alpha = .84$) and 'social emotions' (pity, sympathetic, anxious, nervous; $\alpha = .76$).

Enjoyment. Six items from Skalski, Tamborini, Shelton, Buncher, and Lindmark (2011) were used to measure enjoyment of watching the show and averaged to create a composite variable ($\alpha = .96$). One weak item was excluded. Example

questions include: “I like this show,” “I wish I could have watched the show for longer,” and “I would like to watch this show again” (1 = Strongly Disagree to 7 = Strongly Agree).

Trait Empathy. The Interpersonal Reactivity Index (Davis, 1980, 1983) was modified and used for this trait. Though the original instrument consists of four subscales—fantasy, personal distress, perspective taking, and empathic concern, previous studies have successfully measured empathy by adopting the perspective-taking and empathic concern subscales (e.g., Burkard & Knox, 2004; Gini, Albiero, Benelli, & Altoe, 2008; Jolliffe & Farrington, 2006). Thus, the current study used items from perspective-taking (5 items; $\alpha = .79$; e.g., “I sometimes try to understand my friends better by imagining how things look from their perspective”) and empathic concern (7 items; $\alpha = .83$; e.g., “I often have tender, concerned feelings for people less fortunate than myself”).

Previous Show Experience. Two questions were asked regarding whether or not participants had watched 1) the show and 2) the episode before (0 = No, 1 = Yes), and were treated as two separate control variables in analyses.

Results

Manipulation Check

Participants in both conditions were asked whether they were allowed to use technological devices to tweet while watching the show. The chi-square result was significant, $\chi^2(1) = 206.38, p < .001$, suggesting that significantly more participants in the experimental condition answered “yes” than those in the control condition. Participants in the experimental condition sent out 4.98 tweets on average ($SD = 2.09$). Descriptive statistics and zero-order bivariate correlations are presented in Table 1. The researchers also checked if participants followed experimental instructions—not tweeting in the control condition or sending five tweets in the experimental condition. Although 16 participants in the experimental condition tweeted fewer than five tweets while watching the show, the results did not significantly change when they were excluded from the analyses. Hence, no cases were excluded from the analyses.

Hypotheses Testing

Due to the unequal sample sizes in the two experimental conditions, Welch’s t-test was used for mean comparisons, instead of Student’s t-test (Ruxton, 2006) (see Table 2). This approach allows for greater control over Type 1 error (Delacre et al.,

Table 1
Bivariate Correlations among Variables

Measure	1	2	3	4	5	6	7	8
1. Multitasking	-							
2. Enjoyment	.02	-						
3. Transportation	.24***	.42***	-					
4. Positive Emotion	-.02	.64***	.36***	-				
5. Negative Emotion	-.01	-.15*	.01	-.04	-			
6. Social Emotion	.02	.21**	.40**	.18**	.31**	-		
7. Perspective Taking	-.10	.05	-.01	.04	.03	.12	-	
8. Empathetic Concern	-.02	.32**	.18**	.23**	-.13**	.20**	.28**	-
<i>M</i>	NA	5.89	3.16	4.80	1.56	3.06	5.30	5.20
<i>SD</i>	INA	1.29	0.68	1.28	0.99	1.28	0.82	0.97

* $p < .05$. ** $p < .01$. *** $p < .001$

2017). H1 stated that media multitasking would decrease enjoyment. The result showed no significant effect, *Welch's t* (201.02) = .09, $p = .76$. Participants in the control condition reported similar level of enjoyment ($M = 5.91$, $SD = 1.33$) as those in the experiment condition ($M = 5.85$, $SD = 1.22$). Thus, H1 was not supported.

H2 and H3 hypothesized that concurrent TV-viewing and tweeting would affect transportation and emotions, respectively. Welch's t-test results revealed that this multitasking had a significant effect on transportation (*Welch's t* (204.29) = 14.36, $p < .001$). Participants in the control condition reported greater levels of transportation ($M = 3.29$, $SD = .69$) than those in the experimental condition ($M = 2.96$, $SD = .62$), supporting H2. However, no significant effect of multitasking was found on positive emotion, (*Welch* (191.76) = .09, $p = .77$), negative emotion (*Welch* (186.68) = .02, $p = .90$) or social emotion (*Welch* (210.97) = .07, $p = .79$), lending no support to H3.

Table 2
Welch's T-Test for Mean Comparison

	TV-viewing		TV-viewing and tweeting		<i>t</i> -test
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Enjoyment	5.91	1.33	5.85	1.22	.09
Transportation	3.29	0.69	2.96	0.62	14.36***
Positive emotions	4.78	1.29	4.83	1.27	.09
Negative emotions	1.56	0.98	1.58	1.01	.02
Social emotions	3.07	1.35	3.03	1.15	.07

*** $p < .001$

Hayes' PROCESS MACRO program was used to test the mediation (Model 6) and moderated mediation (customized model) hypotheses. H4 proposed that concurrent TV viewing and tweeting will result in lower levels of transportation and emotional response, which in turn negatively affect enjoyment (see Table 3). The indirect effect of the multitasking on enjoyment (coded as dichotomous variable: Experiment = -1.56, Control = 1) via transportation and negative emotions was not significant (effect < -.001, CI = -.01 to .004). However, the indirect effect via transportation and positive emotions (effect = .05, CI = .02 to .08), as well as social emotions (effect = .02, CI = .004 to .03) were significant. Path coefficients indicated that concurrent TV viewing and tweeting negatively affected transportation ($B = -.13, p < .001, CI = .06 \text{ to } .20$), which further influenced positive emotions ($B = .62, p < .001, CI = .39 \text{ to } .86$) and social emotions ($B = .73, p < .001, CI = .50 \text{ to } .96$), but not negative emotions ($B = .05, p = .62, CI = -.15 \text{ to } .24$). Finally, positive emotions ($B = .54, p < .001, CI = .44 \text{ to } .64$), negative emotions ($B = -.17, p = .007, CI = -.30 \text{ to } -.05$) and social emotions ($B = .17, p = .001, CI = .07 \text{ to } .27$) all influenced enjoyment. These results partially support H4. The data showed that concurrent TV viewing and tweeting had a significantly negative impact on enjoyment, when mediated by lower levels of transportation and positive and social emotions.

In order to address RQ1, a customized moderated mediation model was constructed to examine if the indirect effect of concurrent TV-viewing and tweeting on enjoyment (via transportation and three emotions factors), was different among those who scored high versus low on trait empathy (moderator). Previous exposure to the show and the episode were included as covariates on enjoyment (see Figure 2). The

Table 3
Indirect Effects of TV-viewing and Tweeting via Transportation and Emotions on Enjoyment

Indirect Effects	Indirect Effect		95% Bootstrap Confidence Intervals	
	Estimate	SE	LLCI	ULCI
Multitasking → Transportation → Positive Emotion → Enjoyment	.05	.02	.02	.08
Multitasking → Transportation → Negative Emotion → Enjoyment	-.001	.002	-.01	.004
Multitasking → Transportation → Social Emotion → Enjoyment	.02	.01	.004	.03

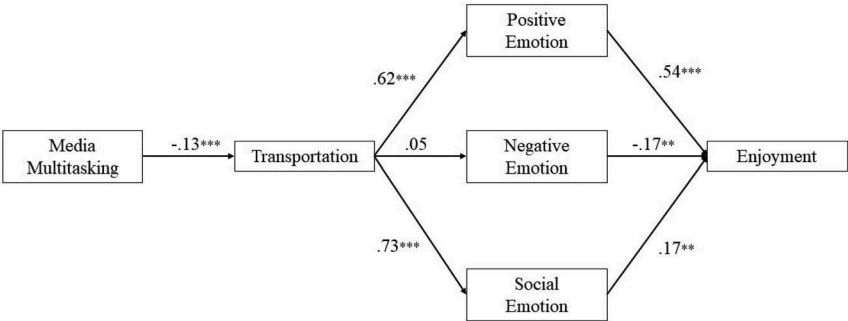
Note. LLCI & ULCI = lower level and upper level confidence intervals, respectively. CIs are based on the bootstrapping of 5,000 samples.

Table 4
Conditional Effect of TV-viewing and Tweeting on Enjoyment at Values of Trait Empathy

Mediation	Moderator	Indirect Effect		95% Bootstrap Confidence Intervals	
		Estimate	SE	LLCI	ULCI
Multitasking → Transportation → Positive Emotion → Enjoyment	PT	-.0002	.01	-.02	.02
	EC	.003	.01	-.01	.02
Multitasking → Transportation → Negative Emotion → Enjoyment	PT	-.002	.004	-.01	.002
	EC	.001	.003	-.01	.01
Multitasking → Transportation → Social Emotion → Enjoyment	PT	-.003	.004	-.01	.003
	EC	-.003	.003	-.01	.002

Note. PT = perspective taking. EC = empathic concern. LLCI & ULCI = lower level and upper level confidence intervals, respectively. CIs are based on the bootstrapping of 5,000 samples.

Figure 2
Mediation Model
*** $p < .001$, ** $p < .01$, * $p < .05$



result suggests that neither of the two trait empathy factors—perspective taking (CI = $-.02$ to $.02$) nor empathic concern (CI = $-.01$ to $.02$)—were significant for the serial mediation through positive emotions. The same non-significant results replicated on negative emotions (perspective taking: CI = $-.01$ to $.002$; empathic concern: CI = $-.01$ to $.01$) or social emotions (perspective taking: CI = $-.01$ to $.003$;

empathic concern: $CI = -.01$ to $.002$). This indicates that the indirect effect of multitasking on enjoyment (via transportation and emotions) was not moderated by trait empathy.

Discussion

This study has meaningful implications for multitasking research, by taking a media effects perspective and focusing on affective experiences of media multitasking. While the results from this study indicate that there is no direct effect from concurrent TV-viewing and tweeting on emotions and enjoyment, the mediation analysis was positive and in the predicted direction. The results indicated that those concurrently engaged in TV-viewing and live-tweeting experienced lower transportation, less positive and social emotions and, in turn, lower levels of enjoyment of the show, compared to those watching the show without live-tweeting.

Studies have shown that multitasking effects are greater when user-control is higher (Jeong & Hwang, 2016; Ralph, Seli, Wilson, & Smilek, 2018). This offers one explanation for the negative indirect effect of multitasking on enjoyment. Potentially, if the participants in the experimental group had greater control (e.g., to pause the TV show, tweet, and then resume watching TV), perhaps their levels of transportation and subsequent enjoyment would not have been hampered. Thus, a practical recommendation for media producers would be to provide ample opportunities for users to control their primary screen activities, even as they toggle between multiple media use. Concomitant to user-control, measuring cognitive load (actual or perceived), might offer more insights on how individuals manage the cognitive demands of multitasking (Lang & Chrzan, 2015).

Another explanation offered by Jeong and Hwang (2016) comes in the form of task-contiguity, which is the extent to which the primary (TV-viewing) and secondary (tweeting) tasks are physically separate. Tasks that are low on contiguity (i.e., more separate) lead to negative effects because individuals have to expend more cognitive resources to physically and mentally shift between the two tasks. This constant switching between primary and secondary tasks could reduce levels of transportation, and in turn lead to more negative evaluations and outcomes. Recent research has shown that in real life settings, multitasking often happens on the same device (Yeykelis, Cummings, & Reeves, 2014). This ensures high task-contiguity and reduces negative outcomes, with implications for app design in mobile devices and smart TVs. Offering the ability to switch between tasks on the same device leads to better user experience, and more positive outcomes. Hence, considering the role of individual-based (e.g., user control and cognitive load), and task-based, contextual factors (e.g., task-contiguity), offers venues for future research.

It is also likely that if users perceive advantages to tweeting while watching TV, for example, greater social connection with others (Reinecke et al., 2014; Sheldon, Abad, & Hinsch, 2011), it could lead to greater enjoyment. In fact, recent studies

(e.g., Ralph et al., 2018) have shown that multitasking could lead to reduced boredom, which in turn has a positive effect on task performance and affective experiences. Ralph et al. (2018) argue that individuals strategically modulate their multitasking based on the complexity of the primary task and the inherent costs and benefits that emerge with such behavior. Exploring such mechanisms that potentially offset and compensate the costs of multitasking is a ripe area for future research.

This study extends transportation theory by applying it to a media multitasking context. Given the current prevalence and popularity of TV shows launching live-tweeting and its possible impact on perceived enjoyment of the show, this topic is in need of more research on the importance of exploring optimal strategies – to minimize undesirable experiences and maximize the virtue of second-screen use – in entertainment media and beyond. Specifically, results confirmed the theoretical link between transportation, emotion, and enjoyment. This research supports the assumption of transportation theory that individuals who are engaged in a narrative are likely to consider any factor hindering from transportation (i.e., tweeting) to be distracting, which influences emotions and appraisal of overall enjoyment of the narrative. Additionally, while it was found that there is no direct effect of concurrent TV viewing and tweeting on enjoyment, an individual's perceptions of transportation and their emotional experience mediate this relationship.

Further, findings indicate that an individual's empathy did not moderate the effect of concurrent TV viewing and tweeting on either transportation, emotions, or enjoyment. The results surrounding this particular variable of trait empathy on media enjoyment and transportation are mixed (Green & Brock, 2002; Hall & Bracken, 2011; Vorderer, Klimmt, & Ritterfeld, 2004). This warrants additional research on empathy and other relevant individual difference variables—for example, preference for online social interaction (Caplan, 2005) or extraversion (Finn, 1997),—and how they moderate a link between multitasking, cognitive and emotional outcomes.

Limitations and Future Research

The current study is not without limitations. One limitation of this study is the artificiality of the laboratory setting. Unlike natural settings where live-tweeting is a self-chosen behavior, this study assigned participants into different conditions where engagement with tweets and the number of tweets were predetermined. This manipulation was strategically adopted to ensure enough variance in manipulation of media multitasking, thus increasing internal validity, but reducing external validity. Also, participants were invited to partake in the experiment in a group setting with other students, whom they may or may not have known. However, in real life, they may choose whom they want to interact with on social media of their own volition. Additionally, the laboratory

resembled a classroom setting. These factors could have subtly influenced participants' responses. Future research could examine these relationships in a more natural setting, along with observing participants' voluntary tweeting behavior. On a related note, attrition and data collection schedule contributed to unequal sample sizes in both groups. While we statistically accounted for this variance, future research should strive to achieve similar sample sizes across conditions.

Secondly, in the current study, the multitasking group was asked to send relevant tweets about the *Friends* episode. However, this is not likely to reflect the pattern of media use in their everyday life where they may tweet irrelevant content or engage in other unrelated second-screen use during TV-viewing. According to Dolbin (2015), the more relevant the second screen use to the primary screen use, the more enjoyment experienced from the primary media activity. Future research might examine media transportation and enjoyment when people are allowed to tweet any type of messages, thus, capturing both related or unrelated secondary media activity during TV-viewing.

Thirdly, the stimulus for this research was not pretested. However, this study selected the comedy show *Friends* as the stimulus because it did not require previous knowledge of the show or the characters. Furthermore, the episode focused on the characters' trivial knowledge of each other and thus participants would likely not need complex cognitive processing for this episode. Due to its amusing content for the most part, however, the baseline enjoyment level ($M = 5.47$, $SD = 1.41$) was fairly high. Furthermore, enjoyment of tweeting activity was not measured, and it is possible that enjoyment levels of a TV sitcom (evaluation of primary task) might have been influenced by the levels of enjoyment of tweeting about the show, and vice versa. Thus, future studies on media multitasking should pretest their stimulus and examine how enjoyment of each, primary and secondary screen, impact one another.

Fourth, it is important to note that transportation theory applies to media content containing narratives (Tal-Or & Cohen, 2010). Hence, the current study used an episode of TV show, *Friends* (containing a narrative), as the stimulus. Therefore, the findings from this study may not be generalizable to other forms of media multitasking that do not involve a narrative. Future research should investigate how multitasking involving non-narrative (vs. narrative) media differ in terms of cognitive, emotional and enjoyment responses evoked.

Finally, the participants are all college students and the results obtained from this population group may constrain its generalizability to other demographic groups (Eastin & LaRose, 2000). However, it is worth noting that college students are an ideal population for this study, as they report using mobile devices 57% of the time, while watching TV programs (Spangler, 2015). Future research might try to replicate the findings of the current study by recruiting more demographically diverse audience groups.

Conclusion

This paper explores relationships between concurrent TV viewing and tweeting, transportation, emotion, and enjoyment, based on an experimental design. Despite its popularity among mass communication practitioners, this paper reveals potential pitfalls of live-tweeting on audience viewing experiences, especially their levels of transportation and emotional responses. The results verify basic assumptions deduced from transportation theory, that lower transportation due to simultaneous media use reduces emotions, which in turn, adversely impacts viewers' enjoyment levels. We believe that these results have considerable implications for literature pertaining to transportation, media enjoyment and multitasking, at large.

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Beyond the “Like”: How People Respond to Negative Posts on Facebook

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Beyond the “Like”: How People Respond to Negative Posts on Facebook

Erin Spottswood and Donghee Yvette Wohn

New features of social network platforms afford users the ability to navigate potentially sensitive situations in ways they could not before. This study surveyed 260 Facebook users to uncover how people are using this social media platform's new “reaction” buttons to respond to others' posts about negative topics such as traumatic life situations, catastrophic current or past events, and interpersonal crises. Results suggest that users do not perceive the reaction buttons as adequate tools to help them interact with those that are close to them. Instead, these new paralinguistic digital affordances seem to help users engage in social grooming.

Today, millions of people use social network sites (SNSs) to openly disclose or post about traumatic and/or upsetting events, situations, and feelings. This phenomenon places users of these technologies in a bit of an interpersonal dilemma: how to respond to the negative posts from people that are not in a user's close personal circle. Traditionally, in face-to-face (FtF) interactions, negative disclosures typically occur between people in close relationships, where the receiver would know the sender well enough to know how to respond (Derlega & Chaikin, 1977). However, SNSs make it possible for people to see negative disclosures in the form of public posts from people they are not as close to. The inclination is to respond in some way in order to preserve or maintain the relationship (a.k.a., “social grooming”, Donath, 2007; Ellison, Vitak, Gray, & Lampe, 2014), but a lack of closeness or familiarity with the poster may make it difficult to determine how to respond.

Research has shown that people sometimes take advantage of paralinguistic digital affordances (PDAs) to respond to others' posts (Carr, Wohn, & Hayes, 2016). PDAs are “cues in social media that facilitate communication and interaction without specific language associated with their messages” (Hayes, Carr, & Wohn, 2016, pp. 172–173).

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Sometimes, responding to a post by using a PDA is seen as a signal of social support (Wohn, Carr, & Hayes, 2016), but not always (Hayes et al., 2016). Moreover, as SNSs add new PDAs to their sets of features, research needs to continue to examine when, why, and how PDAs are being used to respond to others' posts.

In 2016, Facebook added five new single-click response features called "Reactions" that afford users the ability to express their emotional response to content they come across on the site without using words or text. These include a heart symbol icon and four icons of facial expressions that include a laughing face ("haha"), a surprised face ("wow"), a sad face ("sad"), and an angry face ("angry").¹ This study set out to uncover how users are incorporating these new features into their responses on Facebook, especially when people come across posts that contain a negative disclosure.

Literature Review

Negative Disclosures via FTF and SNSs

This study characterizes a negative topic disclosure as a disclosure about an emotionally upsetting experience and includes topics such as traumatic life situations (e.g., loss of a loved one, serious mental or physical illness), catastrophic current or past events (e.g., school shootings, political upheaval), and interpersonal crises (e.g., divorce, family fights). Typically, people disclose about negative topics to people with whom they have close relationships, in order to obtain comfort or support (Greene, Derlega, & Matthews, 2006). In addition, it is considered inappropriate for people not in close relationships to make negative disclosures to each other (Petronio, 2012). This is consistent with research on the nature of strong versus weak ties, where strong tie is a term used to indicate the tie or relationship between two people as being strong or close (Putnam, 2001). These lines of research when considered together, potentially suggest: 1) people typically disclose about negative topics to strong ties and 2) people may be less sure how to respond if and when they encounter a negative topic disclosure from a weak tie.

Research about negative topic disclosures has been extended to SNSs. For example, recent studies have found that users sometimes publicly disclose or post about their struggles with depression (e.g., Bazarova, Choi, Whitlock, Cosley, & Sosik, 2017), illness (Gage-Bouchard, LaValley, Mollica, & Beaupin, 2017), relationship dissolution (Haimson, Andalibi, De Choudhury, & Hayes, 2018), and death (Marwick & Ellison, 2012). Given that users sometimes post about negative topics, they are likely to see other users' negative topic posts on the site as well. It is this latter group of users that is of interest to this study.

Social Grooming on SNSs

One might assume that seeing a negative topic post from a weak tie does not necessitate the need to respond; however, users of SNSs tend to see these platforms as a way to maintain a large and diverse network of both strong and weak ties (Ellison & Vitak, 2015). As a result, they may feel the need to respond to their weak ties' posts, a phenomenon known as social grooming. According to Donath (2007), social grooming takes place when a person attempts to signal to another person that they are thinking of them, likes them, trusts them, or considers them to be important. Ellison et al. (2014) believe that people use SNSs to engage in social grooming behaviors such as posting on each other's profiles as well as "Liking" or using PDAs to respond to each other's posts. The use of PDAs in particular seem to be a very efficient way for weak ties to engage in social grooming; on Facebook, the "Like" PDA has been shown to signal to the receiver that they are being thought about and cared for (Carr et al., 2016). But different people have different interpretations about what Facebook "Likes" actually signal (Hayes et al., 2016; Scissors, Burke, & Wengrovitz, 2016).

The ambiguity of the "Like" PDAs can leave people unsure about whether it is appropriate to use them to respond to a negative topic post from a weak tie. However, composing and leaving a comment is not necessarily a better response option. Responding to a negative post can be challenging, especially when the responder does not know the discloser well. That may be why Facebook users sometimes feel stressed or burdened by seeing and feeling the need to respond to negative topic posts from other users on the site (Maier, Laumer, Eckhardt, & Weitzel, 2015). This suggests that SNS users might want low-effort response options that they could use to express their emotional reaction to a post. Since Maier et al.'s (2015) study, Facebook has rolled out new features that afford users the ability to express their emotions in response to others' posts with a single click.

Responding with Paralinguistic Digital Affordances

Facebook has many communication features that afford users the ability to respond to content they see on the site with more or less effort and emotional expressivity. Until early 2016, Facebook's "Like" PDA, which is represented by a thumbs-up icon, was the only PDA available to users on the site. As discussed above, what a "Like" is supposed to mean or signal varies according to the situation, the poster, and the responder. Given the "Like's" many potential meanings, users may want to use other efficient but nuanced PDAs to respond to their weak tie's posts. Facebook is one SNS that seems to have addressed that need with their inclusion of more emotionally expressive PDAs.

The heart, or "Love" icon as Facebook refers to this icon on its site, looks similar to other SNSs that also have this response feature (e.g., Instagram, Pinterest),

although not all SNSs interpret the heart as “Love” (e.g., on Twitter, a heart indicates that one “likes” the post). It is possible Facebook users perceive the “Love” as more indicative of affection than the “Like” button on the site. As a result, people may feel that the “Love” button does a slightly better job at expressing how they feel for a weak-tie, when the latter posts about a negative topic on Facebook (i.e., that the responder cares for the poster, is sending them positive feedback, etc.).

The other four PDAs are icons of facial expressions that tend to be associated with certain human emotions, potentially making it easier for receivers to interpret their meaning. For example, the sad face emote contains upward slanting eyebrows, open eyes, a frown, and a single tear, which are all symbolic of sadness. Alongside the sad face emote is a laughing face emote, a surprised or shocked face emote, and an angry face emote. In addition to these new PDAs as being more emotionally expressive, they require slightly more physical effort to use as well (i.e., you have to hover over the “Like” button in order to see, access, and then click on the “Love” or emote buttons). As such, while requiring less effort than other response options such as commenting or private messaging, they require slightly more effort than just clicking on the “Like” button. And yet, though they require slightly more consideration and execution, they are still a low-effort way to express one’s emotional reaction to a post. People may see these emotes as useful response options that can help them respond to a weak tie’s negative topic post—in a way that signals how they feel for the poster and/or the situation (e.g., sad)—without requiring the effort of composing and leaving a comment and/or risk committing an interpersonal faux pas. Thus, the “Like” button could be perceived as the vaguest type of PDA on Facebook, the “Love” PDA as a slightly more emotionally expressive but still relatively vague type of PDA on Facebook, and the emotes as the most emotionally expressive type of PDA on Facebook.

Other Response Behaviors

PDAs, of course, are not the only way users can respond to others’ posts on Facebook. Below each Facebook post is a comment box where users can write out a response that is shared with a group of unknown others on the site, since the poster, not the commenter, decides on the privacy settings. Commenting takes more effort and allows for more emotional expressivity, as it allows users to craft a verbal response indicating how they feel about the post as well as their concern for the poster (Burke & Kraut, 2016). Users can also send their verbal response via a private message, if they prefer their response to be less visible. It is also possible that users may reach out to the poster outside of Facebook. Given that Facebook users sometimes post about negative topics on Facebook, and now Facebook affords users the ability to respond to those posts with varying degrees of effort and emotional expressivity, this study wanted to explore what influences the different ways people respond to negative posts they see on

Facebook. Moreover, given the newness, distinctiveness, and lack of research examining the emotes, this study set out to explore a few key relational and individual factors that may affect different response behaviors on and off Facebook.

Relational & Individual Factors

Closeness. As discussed above, tie strength or relational closeness may be a factor that partially explains when and why people respond to others' negative topic posts on and outside of Facebook. People in close relationships tend to take the effort to be there for each other in times of need whether the interaction occurs face-to-face (Argyle & Henderson, 1984) or via SNSs (Vitak, 2014). Since the majority of a user's Facebook network tends to be comprised of weak ties (Ellison & Vitak, 2015), coupled with the inclination to maintain and nurture weak ties, people may perceive the new PDAs as useful response options to help them signal to their weak ties their emotional reactions to the latter's negative topic posts on Facebook. On the other hand, people may be more inclined to use more effortful forms of responding when they see a negative topic post from a strong tie to ensure the poster is ok and to signal they care about the poster. To test these assumptions, the following hypotheses will be tested.

H1a. Closeness will negatively explain the likelihood of responding to negative topics on Facebook in a way that is emotionally expressive but not effortful, such as the use of emotes.

H1b. Closeness will positively explain the likelihood of responding to negative topic posts on Facebook in a way that is emotionally expressive and effortful, such as usage of:

- a. Commenting
- b. Responses outside of Facebook post

Reciprocity. Reciprocity may also play a key role in how people respond to negative topic posts on Facebook. Social grooming is typically conceptualized as a reciprocal activity (Donath, 2007; Ellison & Vitak, 2015). In terms of SNSs, when a person sees that their "friends" have left PDAs or comments in response to their post, they might feel like they should use PDAs and/or leave comments for them in return. For example, Vitak, Ellison, and Steinfield (2011) found that responding to others' posts in the past predicted if participants felt they had close relationships and could rely on those they are close to for guidance and support. They interpreted this finding to mean that if a user hopes to obtain support, it is

important to take the time to reply to others' posts on SNSs such as Facebook. The current study seeks to add to the research on reciprocal communication behaviors that occur on SNSs, by examining this phenomena on a more dyadic or interpersonal level with the following hypotheses.

H2. Reciprocity of responding to each other's posts will positively explain the likelihood of responding to negative topic posts on Facebook in a way that is emotionally expressive such as usage of:

- a. Emotes
- b. Commenting
- c. Reaching outside of the context of the Facebook post

Automaticity. Another individual factor that is relevant to this study is a user's habits of clicking on PDAs. Habits are defined as "learned sequences of acts that have become automatic responses to specific cues" (Verplanken & Aarts, 1999, p. 104). This is distinct from unconscious behavior; in which the person is fully aware of what she or she is doing without deliberating on what is motivating their behavior. Research has consistently shown that habit is a strong construct that can explain social media use, including communication or responding behavior (Wohn, Velasquez, Bjornrud, & Lampe, 2012). Those who have an inherent tendency to automatically respond to content on SNSs (Wohn et al., 2016) may use the "Like" to respond to negative posts they see on Facebook, but probably not other reactions, which require more effort. As a result, this study predicts:

H3. PDA Automaticity will positively explain the likelihood of responding to negative topic posts on Facebook with a method that is easy and simple, such as a "Like" button.

Topical Factors

There are many different negative topics that users sometimes post about on Facebook. However, the aforementioned examples are in no way an exhaustive list of the types of negative or upsetting topics that users post about on Facebook. As such, this study also wanted to see if certain topics affect response behaviors on the site:

RQ1. Which types of negative topics explain the choice of various response behaviors?

Methods

This study used an online panel service by Qualtrics to recruit U.S. adult Facebook users ($N = 260$) to take our survey. Participants were an average age of 36.20 ($SD = 13.67$), ranging from 18 to 77 years. In terms of gender, 48.5% identified as male and 50.4% as female. Our sample was predominantly White (66%), followed by Black (12%), Hispanic (7%), Asian (5%), and Native Indian/Pacific Islander (1%). On average, participants had 340.19 Facebook friends ($SD = 494.586$).

After filtering participants for those who had used Facebook in the past three months, participants were asked to complete a survey with open and close-ended questions. They were first given the following description: "Very often people see Facebook posts about negative experiences, such as a post about a death, loss of job, feeling sick, or fighting with a friend. Tell us about a recent time that you saw a post about another person's negative experience. Please pick something that got your attention and that you responded to (e.g., Liked, clicked on a reaction button, and/or commented on the post). Please copy and paste that person's post here or describe in detail what it was." Participants could then write in the details of the specific post into an open-ended text box. Since we did not obtain permission from the Facebook friend to analyze their post, we did not report any identifying details of any individual post in our analyses— the main purpose of recalling a specific post was to make that memory salient for the participant so they could answer subsequent questions about their experience.

We then asked participants how they responded to this negative post. They could choose all that applied from a list that included "Like", all Reaction options, commenting, and reaching outside of Facebook. We then had a second open-ended text box asking participants why they chose the response that they had indicated in the previous question. In addition, we also asked a number of questions about the participant's relationship with the poster, such as length of acquaintance, frequency of communication, perceived closeness and frequency of reciprocal responses between the participant and the poster in general.

Measures

Closeness ($M = 2.96$, $SD = 1.11$, Cronbach's $\alpha = .92$) assessed an individual's perception of closeness with the poster and their desire to be close to the poster on a scale, ranging from 1 (no relationship at all) to 5 (very close) (Aron, Aron, & Smollan, 1992). Reciprocity ($M = 3.06$, $SD = 1.19$) referred to how often the individual responded to the poster when they posted something and vice versa; this concept was gauged on a scale ranging from 1 (never) to 5 (always). PDA Automaticity ($M = 2.34$, $SD = .94$, Cronbach's $\alpha = .83$) was measured

using a four-item subscale of the Self-Reported Habit Index (Verplanken & Orbell, 2003), which includes automaticity as one of the dimensions. The items which participants rated from 1 (strongly disagree) to 7 (strongly agree) included: "I respond to posts without thinking," "I respond to posts automatically," "I respond to posts without having to consciously remember," and "I respond to posts before I realize I'm doing it."

Three control variables were also operationalized. First, Demographic variables included age and sex were measured. Time on Facebook ($M = 3.31$, $SD = 1.67$) was an ordinal measure of six options asking participants "In the past week, on average, approximately how many minutes *per day* have you spent actively reading and posting on Facebook?" The answer options were less than 10 minutes (13.5%), 10–30 minutes (26.5%), 31–60 minutes (19.2%), one-two hours (14.2%), two-three hours (9.2%), and more than three hours (17.3%). Empathy, the ability to project oneself into the experiences of others (Davis, 1983), was treated as a control variable because studies have found that people who are more empathetic also tend reach out more to another who exhibits distress (e.g., Devoldre, Davis, Verhofstadt, & Buysse, 2010). A well-established 20-scenario scale by Jolliffe and Farrington (2006), with sample items such as how much the individual understood others' feelings, was used to assess empathy ($M = 3.50$, $SD = .49$, Cronbach's $\alpha = .84$). These items were rated from 1 (strongly disagree) to 5 (strongly agree). Demographic variables included age and sex.

Results

Topic Categories

This study first sought out to categorize the different negative topics participants discussed in their surveys. Three independent coders developed categories through iterative coding. After developing a list of preliminary categories, each coder independently coded the same 50 posts to determine intercoder reliability. As coders were not in 100% agreement, they discussed and refined the definition of each of the categories and went back and recoded the same 50 posts. This was an iterative process until they reached 100% agreement on those posts. Then the coders coded the rest of the posts—any disagreements were resolved through discussion.

The most predominant category for (perceived) negative posts was death and illness (43%), followed by family (29%), personal venting (14%), politics (9%), relationships (8%), financial hardships (6%), personal property damages (5%), news (4%), and prayer requests (4%). Also, 23% of the posts were "vaguebooking" meaning that the reader perceived it as being negative but the context was very unclear. Death and illness included posts mentioning recent deaths as well as earlier losses of family, loved ones, or pets, usually on the anniversary of the

death. The family category refers to a post that mentioned a family member— most common topics were related to tragedies or conflicts, such as child custody issues or grievances about specific family members. The relationship category included posts about the dissolution, betrayal, or discontent related to friendships and romantic relationships, excluding family. Most examples were about relationships that did not end amicably or involved abuse, contained expressions of heartbreak or thoughts of revenge.

The prayer category consisted of posts that literally referred to giving, receiving, or requesting prayers. The political category included posts about politically-oriented events such as national protests (e.g., Black Lives Matter), complaints about the inadequacy of gun control legislation, and criticism of specific politicians (e.g., Hillary emails and Donald Trump tax return). Personal property posts referenced the loss, theft, or destruction of personal property. The news category was for posts that linked to news stories that were not political. These included bad weather— such as complaining about the excessive heat or reporting that low water levels caused closures to boat ramps— local car accidents, or animal abuse. Financial hardship posts were about job loss and/or poverty. Personal posts were about private situations that could not be categorized into any of the previous categories, such as drinking problems or misunderstandings with others. Vaguebooking was a post that expressed unhappiness, frustration, or depression, etc., without discussing the context— the reader knew that the poster was in a negative state but not why.

Hypothesis Testing

To test our hypotheses and explore our research question, we ran binary logistic regressions, using participant response to the post as the dependent variable. There were five dependent variables: choice of “Like”, “Love”, emotes, comment, and reaching out to the poster outside of Facebook.

When asked about how they responded to negative posts, 16.2% of the participants used a “Like” button, 3.5% used a “Love”, 2.7% a “haha”, 5.4% a “wow”, 44.6% a “sad” face, 6.9% an “angry” face emote. In total, 59.6% used some sort of emote, 29.2% commented, and 36.5% said they reached out to the person outside of Facebook. Commenting and reaching outside of the Facebook post was not mutually exclusive to responding with a PDA, as 23 people who used a PDA also commented, and 64 people who used a PDA also reached outside of Facebook. Of the people who reached out to the poster outside of Facebook, 32.7% made a phone call, 31.7% sent a private message (either through Facebook messenger or text message), and 16.8% said that they visited the poster in person. Three individuals used email, one used videochat, and one used a postal letter.

For our regression models, we had age, sex, active minutes on Facebook, and empathy as control variables. Independent variables were closeness, reciprocity, PDA automaticity, and the nine topic categories. All regression model results are in Table 1.

Explaining "Like". This study set out to explore what explains likelihood of the use of the "Like" button. The model (Table 1) explaining the choice of a "Like" as a response indicated with 85% accuracy the likelihood of choosing that response (Nagelkerke $R^2 = .20$). The Hosmer and Lemeshow GOF test indicated that the model was well-fitting ($R^2 = 5.04$, $df = 8$, $p = .75$). Consistent with H4, Automaticity was positively related to using the "Like" button, suggesting that users are continuing to perceive "Likes" as a way to signal they've noticed others' posts without really expressing any emotional reaction to the post directly. Younger participants were more likely to "Like." Participants were less likely to use the "Like" button to respond to a death/illness-related post.

Explaining "Love". This study also set out to explore the factors related to the likelihood of the usage of the "Love" button. The model explaining the use of "Love" button as a response resulted in 96.9% accuracy of the likelihood of

Table 1
Binary Logistic Regression Models Explaining the Likelihood of How Users Responded to a Negative Post on Facebook

	Like	Love	Face emot	Comment	Reaching out outside of post
Age	-.03*	-.04	.02*	.01	-.01
Sex	.64	.45	.00	-.45	-.42
PDA Automaticity	.40*	.12	-.07	-.27	.10
Closeness	.16	.53	-.41*	.30	.59**
Reciprocity	-.39	.80	.28	-.07	.60**
Time on FB	-.13	-.30	.10	.24*	.14
Empathy	-.24	.15	-.03	.41	.38
<i>(Topics)</i>					
Politics	-.39	-17.69	.00	-.57	-.64
News	-.14	-15.32	-.33	-.72	-19.78
Prayer	-.80	2.26	.14	-.77	1.85*
Venting	-1.28	.94	.63	.13	-.28
Finance	.16	-17.86	-.35	.04	.06
Property	-1.25	.86	-.01	-.62	.08
Death/illness	-1.35**	.01	1.66***	-.53	-.34
Vaguebooking	.19	-.41	.29	-.98*	.40
Nagelkerke R^2	.20	.26	.22	.13	.13

Values are beta coefficients, * $p < .05$, ** $p < .01$, *** $p < .001$

choosing that response (Nagelkerke $R^2 = .26$). The Hosmer and Lemeshow GOF test indicated that the model was well-fitting ($R^2 = 11.94$, $df = 8$, $p = .15$). None of the independent variables explained the use of the "Love" button.

Explaining an Emote. This study also inquired about the likelihood of using an emote. The model explaining the application of an emote as a response explained with 68.8% accuracy of the likelihood of choosing that response (Nagelkerke $R^2 = .22$). The Hosmer and Lemeshow GOF test indicated that the model was well-fitting ($R^2 = 10.11$, $df = 8$, $p = .26$).

This study expected that relational closeness would negatively predict the use of an emote, and this hypothesis (H1a) was supported. The closer the participant was to the person who posted about a negative topic, the less likely they were to use an emote as a response. Reciprocity was hypothesized to explain the likelihood of using an emote (H2a), but this was not supported. For death and illness-related posts, participants were more likely to use an emote as a response.

Explaining Commenting. The model explaining creating a comment as a response explained with 70.8% accuracy of the likelihood of choosing that response (Nagelkerke $R^2 = .13$). The Hosmer and Lemeshow GOF test indicated that the model was well-fitting ($R^2 = 9.96$, $df = 8$, $p = .27$). Time spent on Facebook was positively related to commenting. On posts that were vaguebooking, participants were less likely to comment. None of the relationship variables explained likelihood of commenting, thus H1b and H2b were not supported.

Explaining Reaching outside of the Facebook Post. The model explaining reaching outside of Facebook (that was done in addition to responding to the post on the site) explained with 78.1% accuracy of the likelihood of choosing that response (Nagelkerke $R^2 = .39$). The Hosmer and Lemeshow GOF test indicated that the model was well-fitting ($R^2 = 7.02$, $df = 8$, $p = .53$). Closeness and reciprocity were positively associated with the likelihood of reaching out outside of Facebook, supporting H1c and H2c respectively. Participants were also 6.4 times more likely to reach out outside of Facebook when the post they saw was related to a prayer request. Empathy also did not increase likelihood of commenting.

Discussion

The findings of this study have some important implications for research examining when people use communication features such as PDAs on SNSs to respond to others' negative topic posts on these sites. First, this study found that what constitutes a negative topic post on Facebook is diverse across a wide range of topic areas and some of these areas are consistent with past research examining SNS disclosure phenomena. This study found that face emote PDAs were used to respond to

negative posts made by weak ties, which suggests that the new and more expressive PDAs on Facebook may help people in weak tie relationships respond to each other’s negative topic posts. This study also found that people were more likely to reach out to the poster off the site, if the negative topic post came from a strong tie. This same pattern of effects was also found for reciprocity. These results will be unpacked in more detail below.

What is a “Negative” Post?

This study found that users post about a variety of different emotionally upsetting or negative topics. Some of the topics are consistent with past research that looked at posts about relationship dissolution (e.g., Haimson et al., 2018) or serious illness (Gage-Bouchard et al., 2017); they were also topics that one would intuitively associate with being negative or difficult to experience as well as share with other people. However, this study also saw that people sometimes perceive posts about politics or even the weather as being “negative,” if the poster expressed frustration or anger in response to those events. Moreover, about a fifth of the posts that our survey respondents identified as being negative fell into the “vaguebooking” category. This suggests that users of social media are aware of emotions that their contacts are expressing, even if they don’t know the context. However, in some situations, context does matter: the results about response type frequencies suggest that not all negative topic posts are responded to equally, with some accruing more emotes, comments, and/or reach-outs. This could mean that unspoken norms have already developed for particular topic areas. For example, we found that participants were less likely to use the “Like” button, when responding to death or illness-related posts.

The participant’s relationship with the poster also seemed to matter– but not uniformly across all types of PDAs. For example, participants who reported they had a close relationship to the poster tended to use face emotive PDAs less frequently to respond to their negative topic posts. In fact, participants who felt close to the poster tended to reach out to them outside of Facebook. However, relationship closeness did not have any association with the usage of “Likes.”

As such, the results of this study not only expands upon the types of negative topics that people disclose on Facebook, but also starts to uncover how people respond to such posts when they are seen on Facebook. Moreover, the results suggest that participants who reported being less close to the poster tended to use more emotive PDAs to respond to the latter’s negative topic posts, but they were not more or less likely to use the “Like” button as a response. This may mean that PDAs that contain emotional expressions are seen as useful responsive tools for facilitating social grooming behaviors on SNSs, as they convey more nuanced emotional reactions than the “Like” – and required less effort than sending a private message – or writing a comment.

PDAs & Social Grooming

This study predicted that people would use emotive PDAs to respond to negative posts made by their weak ties, and the results were consistent with this prediction. The participants in this study who did not feel close to the person who posted about a negative topic tended to use the emotive PDAs to respond to the post. This suggests that the new PDAs may help people navigate sensitive situations with which they may have had less experience, prior to the emergence and widespread popularity of SNSs. Most people can acknowledge that death and/or loss of a loved one is one of the most traumatic events anyone can experience in life. Before the advent of SNSs, people were likely less aware of when a less close friend or acquaintance (i.e., a weak tie) was dealing with a serious illness, meaning they did not need to worry about if and how to respond to the poster. Now, thanks to SNSs such as Facebook, people are not only exposed to more negative disclosures or posts from their weak ties, they are also afforded the ability to respond to those posts with more or less expressivity.

Not responding at all seems to suggest callousness, and people do not want their weak ties to think they do not care and risk losing the tie. Leaving a “Like” may cause worry that the PDA’s ambiguity suggests the responder does not truly care about the poster, and may even be clicking the “Like” PDA out of habit. On the other hand, responding to every negative post from every weak tie is not possible either because 1) it would be cumbersome or 2) the responder may not know how to compose a comment that is appropriate for the poster or the situation. Now, with PDAs that express a range of emotions –including sadness and shock–, people can let their weak ties know they are thinking of them with a single click.

As such, emotionally expressive PDAs may help people do something they were hard pressed to do before: express their emotional reaction to a weak tie’s traumatic or difficult experience with relative ease but still measured expressivity. Moreover, this finding suggests that people adapt their response behaviors when SNSs add new communication features to their site. For example, Marwick and Ellison (2012) found that users sometimes clicked on “Like” to respond to others’ posts about death (i.e., their grief) on Facebook. But it is important to note that they conducted their study in 2012, when the only PDA available to users was the “Like.” Given that this study shows users take advantage of new PDAs to respond to others’ posts about death on Facebook, it suggests that users are adapting their response to grief posts as the site evolves to allow for more nuanced low effort responding. Thus, as SNSs keep us in more frequent contact with our weak ties, new affordances such as emotionally expressive emotes may help people nurture their weak-tie relationships with relative ease.

Relational Closeness & Effortful Communication

People in close relationships tend to engage in more effortful displays of support and care for each other, when either exhibits emotional distress (Clark & Reis,

1988); the findings from this study are consistent with this line of research. This study found that relational closeness predicted the likelihood a participant would reach out to another user off the platform, which is the most effortful response behavior asked about in this study. PDAs generally do not take much effort to use, their use as the sole response might suggest that the user is not inclined to take much effort to respond to the poster, which might imply to the poster that the responder does not care about them. Given that people in close relationships want their strong ties to know they are there for them in times of distress (Argyle & Henderson, 1984), they may choose more effortful types of response options. This is because doing so nonverbally communicates that the responder cares enough about the poster that they would go out of their way to support the poster. Moreover, according to Media Multiplexity Theory, people in close relationships tend to use multiple communication technologies to stay in touch while those in less close relationships tend to be connected via fewer media (Haythornthwaite, 2005). It is possible that participants who were less close to the poster were unable to reach out to the poster outside of Facebook because they did not have the poster's phone number, email, or rarely saw them face-to-face; this makes the SNS their only option to respond to the negative topic post. Future research should continue to explore how closeness affects response behaviors on and off SNSs.

Although closeness did not predict commenting, this study did find that the more users spend time on Facebook overall, the more likely participants commented on negative topic posts. Perhaps more time and experience on the site makes commenting feel relatively effortless. In addition, if a user has left several comments on various types of posts in the past, they may perceive themselves as an adept commentator and feel capable of commenting on a negative topic post without violating interpersonal norms and/or threatening their relationship to the poster. It could also be a simple matter of spending more time on Facebook and leads to doing more activities on Facebook, including but not limited to commenting on other's posts on the site. Future research should explore how past commenting behavior influences more recent responding behavior.

Reciprocity Revisited

Reciprocity did not predict using a PDA or leaving a comment, but it did predict reaching people outside of Facebook. Given that participants were only asked how frequently they respond to the negative-topic poster's post and vice versa, the reciprocity measure may have not been able to detect the more nuanced ways that people can respond to each other via Facebook (e.g., using a PDA, leaving a comment, sending a message). Given that most work on reciprocity examines how said construct affects communication behavior in general, the results of this study do not necessarily contradict earlier work examining the construct (Carr, Hayes, & Sumner, 2017; Ellison et al., 2014). However, the lack of a significant

effect of dyadic reciprocity in this study leaves questions about how and when reciprocity affects communication behaviors on SNSs at the dyadic level. Future research may want to use more nuanced measures of response behaviors to illuminate how reciprocity may affect dyadic communication on SNSs.

Automaticity

PDA automaticity, a construct that represents more or less “mindless” clicking, was only statistically associated with “Liking” but none of the other response options. The lack of its association with any of the Reactions also suggests that not all PDAs are the same, and that some may require more thinking than others. At the same time, Reactions are still a relatively new feature in comparison to the “Like” button. Thus it is possible that users are much more familiar with “Likes” and have had the time to develop a habit of reacting with “Like,” which may not be the case with emotes. Also, the design of the interface, which requires users to hover over the “Like” button to activate additional reaction options, takes longer than clicking the “Like” and this seemingly small technical feature that delays the response by a second or two is enough to make people more mindful. Further investigation, however, is needed to pick apart the confounds to see if it unfamiliarity, technical delay, or other factors that make a feature’s use less automatic.

Limitations

One of the limitations of this study was allowing participants to discuss any negative topic they wished rather than asking them to focus on a specific genre of negative topics. This may have thwarted this study’s ability to see patterns in response to specific negative experiences or events. This study also did not look at the effect of each emote separately because it wanted to conceptualize emotes as one type of affordance; more granular studies on emotes may require breaking them down in order to uncover how users perceive and differentiate between emotes. The prompt also gave examples of within-Facebook responses—this could have resulted in reduced examples of posts where they reached outside of Facebook.

This study also asked participants to focus on a single negative post rather than answer questions about if and how they respond to negative posts in general. This raises questions such as why participants chose certain posts over others, and if their response is emblematic or if and how they respond to negative posts more generally. However, we asked participants to select a specific post in hopes that doing so would result in seeing a range in the types of posts that participants would perceive as “negative,” which could help identify the type of post may affect certain types of

responding behavior. Future research should also seek to survey more general responses to negative posts to further uncover how people respond to different types of negative posts they see on SNSs.

Finally, it is important to understand that the context of this study was to assess participants' perceptions of posts that appeared in their Newsfeed. This study did not ask about negative topics encountered in specific Facebook groups, which could affect responding behavior due to differing affordances, audience concerns, and norms of responding. Future research should examine response behaviors that are prompted elsewhere on Facebook as well as other SNSs.

Conclusion

The present study examined factors correlated to responding behavior on Facebook, as it expands its communication features and affords users new ways of responding to each other's posts through emotive PDAs. Findings suggest that users may perceive emotive PDAs as a way to express their emotional reactions to content posted on social media, but only in specific contexts (e.g., responding to a negative topic post from a weak tie on Facebook). As social media such as Facebook continue to add features that afford users new ways of interacting with each other on these sites and mobile apps, research needs to continue to examine how users interpret and use these new features. Results coming from this line of research will help current and future researchers better understand and predict how, when, and why users incorporate PDAs into their everyday social media communication practices.

Note

1. These are also the terms Facebook uses to describe their reactions or PDAs on their brand resource center page.

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No potential conflict of interest was reported by the authors.

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Affluenza Revisited: Casting Doubt on Cultivation Effects

**Mark D. Harmon, Maria Fontenot, Nicholas Geidner,
and Abhijit Mazumdar**

The researchers use three secondary analyses to explore further the “affluenza” claims linking amount of television viewing with consumerist/materialist values and “affluenza symptoms” such as life dissatisfaction. Those links were generally supported by multiple regression analysis, though at low levels of explanatory power. Heavy news viewing ran in the opposite direction, with heavy TV news viewing correlated with less consumerist values. The authors also found that viewing by streaming on portable devices did not show affluenza correlations. These findings suggest that active audience program selectivity plays a broader role than that envisioned by cultivation theory.

Affluenza is an invented term, but for more than two decades it has referenced excessive materialistic/consumerist values. Often television viewing has been touted as a prime culprit in the spread of affluenza (de Graff, Wann, & Naylor, 2001). Yet, if a significant subset of television viewing, news, does not follow the affluenza pattern, then one is forced to reconsider its underpinnings.

Concern about excess consumerism has deep intellectual roots. In 1899 Thorstein Veblen coined the term “conspicuous consumption” to describe how the wealthy use material goods to signal status. The same idea may be found in notable books like John Kenneth Galbraith’s *The Affluent Society* (1958) and Vance Packard’s *The Status Seekers* (1959). A backlash against excess consumerism can be found in places such as the voluntary simplicity movement. Duane Elgin, one leader in that movement, wrote, “[T]elevision continues to promote a one-sided, materialistic, and

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consumeristic orientation toward life ... television is being used to unrelentingly urge us to consume ever more when we intuitively know that we must learn to live with less" (Elgin, 1981, p. 196).

The rapid growth of streaming services such as Netflix, Amazon Prime, and Hulu means that consumers are not merely being fed a steady diet of materialistic programming, interrupted by even more materialistic commercials. Instead, viewers enjoy more control in the selection of (often commercial-free) streamed content. Recent books by Aievoli (2016) and Gerzema and D'Antonio (2011) have celebrated this newly empowered and interactive consumer. Stephens (2013) went so far as to claim the last 50 years have been an anomaly and that consumerism was headed "back to how it was intended to be: thoughtful, responsible, and values based" (p. 23). The changing nature of viewing, streaming asynchronously on various screens, also deserves exploration as a research question.

Harmon (2001) crafted a variation of cultivation theory, one suggesting that the central message of television content is not violence but materialistic consumerism—or, more simply, "buy stuff." Harmon's later work (2006) connected across multiple cultures materialistic values and "affluenza symptoms," such as financial and life dissatisfaction and unhappiness.

Expanding cultivation theory into materialism/consumerism brought forth another perspective regarding the prime message on what the theory claims to be a central cultural arm of society, television. This expansion, however, may reveal fractures in the central premises of cultivation theory—that effects depend largely on the amount of exposure, and in the direction of the dominant message. Those premises now are under reconsideration. Katz and Fialkoff (2017) argued that cultivation theory should be "retired" based on, among other things, media and audience changes that make it obsolete.

This research postulates that a significant subset of television viewing, news viewing, may not follow the materialism pattern predicted by cultivation theory. If that is the case, then audience message selectivity likely now is playing such a large role that cultivation theory may, as Katz and Fialkoff (2017) suggested, indeed may be outdated.

Further, the present study concludes with an additional analysis examining whether audience selection by type of viewing, traditional broadcast versus online streaming to devices, also may lessen the explanatory value of cultivation theory.

In particular, this research uses secondary analyses to further explore television use and affluenza. Using the European Social Survey (ESS), this work explores whether news versus overall viewing (sports, entertainment, reality/competition, etc.) makes for different exemplars, affecting the correlation of affluenza values and symptoms with heavier television viewing. The research also uses the Longitudinal Study of American Youth (2007 to 2011) to test various types of TV programs, even individual programs, against the affluenza value that it is important to possess wealth (Miller, 2011). The research also uses a recent Eurobarometer to discern whether manner of viewing, traditional television versus online streaming, affects the correlation of viewing hours with affluenza symptoms.

Literature Review

The effect of viewing television programs on judgment can be explained using a cognitive process model (Shrum, 1995; Tversky & Kahneman, 1973). According to this model, viewing of television programs makes exemplars, such as one for affluence, more accessible in memory for those who view more hours of television. This exemplar accessibility affects prevalence judgments using the availability heuristic (Tversky & Kahneman, 1973).

Cultivation theory suggests that media content, particularly television, influences and affects how viewers perceive reality. Heavy viewers view the real world similarly with the world they see on television (Gerbner & Gross, 1976; Potter, 1993). Rossler and Brosius (2001) found that cultivation effects may be content and/or genre specific. For instance, Lett, DiPietro, and Johnson (2004) found that the amount of news viewing in the wake of the September 11, 2001, attack on the United States was related to negative personal emotions. Though news is a specific genre and non-fictional television programming, similar findings were discovered in fictional programming and the crime show genre. Parrott and Parrott (2015) examined 65 episodes of fictional crime dramas from the 2010–2013 television season of basic cable programming in the United States. Specifically, the authors looked at gender and racial stereotypes involving victim and offender status and suggested that steadfast exposure to stereotypical content may foster distorted perceptions involving the prevalence of crime aimed at women in the real world.

Several studies on cultivation as it relates to materialism/consumerism have been conducted. One of the earliest studies dates back 40 years, when Churchill, Jr. and Moschis (1979) found a positive association between television viewing by adolescents and levels of materialism, although statistically significant, the link explained only a small percent of the variance.

Several researchers have studied how television viewing brings about beliefs related to wealth. Hennigan et al. (1982) found that television programs depict rich people whose jobs, activities, and material possessions reflect upper middle-class and middle-class lifestyles. However, most viewers are unable to have such an extravagant lifestyle as they view on television. Many heavy viewers of television may think that they have comparatively lower living standards, which will give rise to lower levels of satisfactions with life. People who compare themselves with those who are inferior to themselves express satisfaction with life, while those who compare themselves with people superior to them express unhappiness with life (Martin, 1986).

According to Hedebrø (1982, p. 41) the cultural influence of television can be attributed to its broad scope. Satellite technologies made it much easier to bring a diverse range of programs to global audiences (Hedebrø, 1982). We now live in a digitized and globalized multimedia age with multiple flows of information and greater options for audience content selectivity (Thussu, 2018).

O'Guinn and Shrum (1997) found that what viewers watched on television appears to influence their perceptions of what the world is truly like. They also discovered that the "relevant information that people use in the construction of their affluence estimates appears to be more accessible for heavy viewers than light viewers" (p. 289). the ownership of luxury goods as compared with light to moderate viewers (Shrum, 2001). Thus, heavy viewing increases perceptions of a rich society.

Shrum, Burroughs, and Rindfleisch (2005) found that the effects of viewing television programs portraying affluence in society not only give the perception that other people are rich, but they also impact the material values of the audience. They also argue that viewers frequently create perceptions of social reality, including the presence and prevalence of affluence, from what they view on television.

Good (2007) used cultivation theory to examine the relationship between television viewing and attitudes about the natural environment. The author found that heavy television viewers are more apathetic or indifferent about environmental issues. Good also discovered that materialism affects the relationship between television viewing and opinions about the natural environment. The author writes, "This finding offers important insights not only into our understanding of cultivation theory but also into our understanding of our relationship with the natural environment at a time when such information has perhaps never been more essential" (p. 365).

One of the most recent studies centering on cultivation theory and television viewing focused on the "celebrity media diet." Lewallen, Miller, and Behn-Moratiz (2016) looked into the relationship between celebrity media and materialism. They found that a total celebrity media diet, consisting of both celebrity magazines and celebrity television news, had a significant impact on college students' preoccupation with consumerism, particularly for women.

Other studies looked at how watching television made viewers feel. Morgan (1984) found that heavy television viewers, in comparison with light television viewers, are more likely to say that their lives are not great, even lousy. Kubey and Csikszentmihalyi (1990) discovered that heavy television viewing leads to more feelings of alienation among viewers. However, Salzman (1993) claimed that watching television is unthreatening and gives a good feeling to the audience. Salzman (1993, p. 7) defines consumerism as "the cathecting of consumption as an appropriate orientation."

A study using General Social Survey data reveals that there is negative correlation between television viewing and happiness (Robinson & Martin, 2008). According to Kasser (2002), the mediating role of materialism may explain, at least in part, the relationship between feelings of life satisfaction and television viewing. Television viewing may result in less satisfaction with life, because it may bring about greater focus on material values while relegating to the background intrinsic values, for instance, friendship.

According to Yang and Oliver (2010), television viewing is positively associated with one's material value. They also argue that increased material value is associated with

dissatisfaction with personal life. This is more so in people with low economic status in society. The authors also researched the role of upward social comparisons among people. Upward social comparison involves comparing oneself to those who have more or those who are better off. Yang and Oliver found that these types of comparisons were a good way of explaining the association between television viewing and dissatisfaction with life.

While researching the direct effects of television viewing, Yang and Oliver (2010) argued that the effect of television viewing on estimates of the affluence of others might be more among people with higher economic standing. However, the influence of television viewing on material value actually may be greater among people with lower economic standing in society.

Shrum, Lee, Burroughs, and Rindfleisch (2011) studied whether viewing of television impacted materialism as well as life satisfaction. They based their study on the assumption that materialism would mediate the relation between television viewing and feelings of satisfaction with life. They found that the frequency of television viewing is a positive predictor of materialism among viewers. They also argue that materialism mediates the relation between frequency of television viewing and satisfaction with life (Shrum et al., 2011).

Consumers of television programs use information from such programs to gain perceptions of social reality, for instance the spread of affluence in society. Those who view television heavily come to the conclusion that luxury products are far more widespread in society than they actually are. These research findings, however, are based on the assumption that the judgments are memory-based (O'Guinn & Shrum, 1997; Shrum, Wyer, & O'Guinn, 1998).

One extensive review (Smith Speck & Roy, 2008) declared that overall television viewing positively influenced materialism, directly in some cultures but through perceived realism in others, giving what the authors called "limited support for the cultivation theory effect." The linkage between television viewing and consumerist/materialist values does not have to be grounded in cultivation theory. Rosenberger (2016) used more than 6000 cases from the National Longitudinal Study of Adolescent Health, linking TV viewing with a pursuit of the "American Dream" in a manner that relies heavily on economic success and the material indicators of it. Rosenberger's work, in turn, drew from Messner and Rosenfeld's (2001) Institutional Anomie Theory about American Dream aspirations and the willingness to cut corners to make the dream come true.

Several authors have hinted at a connection between affluenza and specific television program genres. Buerkel-Rothfuss and Mayes (1981) found a relationship between what one watches on daytime soap operas and what he or she believes is an accurate portrayal of the "real world" aspects frequently depicted on the programs.

Hayward (1997) also wrote about serial dramas, such soap operas and telenovelas, and the seductive presentation of wealth. Cooper-Chen (1994) conducted a 50-nation study of game shows and found most carried expensive consumer good prizes, though a small set of African nations, plus Jamaica and India, de-emphasized consumer prizes.

Lee, Chen, and Harmon (2016) specifically sought affluenza effects in reality television program viewers. The authors used quantitative surveys ($n = 202$) to analyze the relationships among “reality TV viewing, materialism, and associated consequences such as compulsive buying and life dissatisfaction” (p. 233). The authors found an indirect effect between reality TV viewing and materialism. They also discovered that enjoyment strongly influenced material effects and that reality television may increase the life satisfaction of the viewer.

MTV reality shows were the focus of Oprea and Kühne’s (2016) survey work with a sample of 527 15- to 21-year olds. The researchers found a strong correlation between heavier viewing of those shows and narcissism, materialistic values, and an overall sense of entitlement. Reimer and Rosengren (1990) directly linked materialism and program preference types in a survey of 1,520 Swedish respondents. The researchers used Rokeach Value Surveys and found preference for light entertainment programming correlated with valuing “a comfortable life.” News viewing, in contrast, correlated with the post-materialist value of inner harmony.

Chory-Assad and Tamborini (2001) examined almost 225 hours of television programming in their analysis of television doctors in fictional and non-fictional television programs. The study found that individuals who primarily watch fictional programs with physician portrayals could be negatively affected by television’s representation of physicians. However, individuals who primarily watched news programming with generally complimentary physician depictions could have their perceptions of physicians boosted by viewing non-fictional television programs.

Lull and Dickinson (2018) also found varying effects with program type. Their survey of 565 college students looked at narcissism, albeit not necessarily consumerism, but found that viewers who choose reality TV, sports, suspense/horror/thriller shows, and political talk were positively associated with narcissism, while preference for news was negatively associated. One other recent research project also used cultivation theory and program types. Scharrer and Blackburn (2018) conducted a national survey of 18- to 25-year olds, finding that those who viewed sitcoms, sports, reality TV, and police/detective programs all scored higher than other viewers on the Masculine Roles Norms Inventory, revised scale.

Hypotheses and Research Question

Past work suggests some differences in program types of television viewing and connections to affluenza values and symptoms. The present study thus examined news viewing and overall viewing as expressed in self-reported hours of TV viewing on an average weekday.

Hypothesis 1: Heavier overall TV viewing will correlate positively with participants’ feelings on how important it is to be rich, satisfaction about their household income, and general emotional state.

Because cultivation theory assumes universal effects dependent only on amount of viewing, television news viewing should also correlate with affluenza beliefs and “symptoms.” In fact, one study, using the 1990–1994 General Social Survey and a survey 2300 Philadelphia residents, found a cultivation effect linking watching of crime-saturated local newscasts and fear of crime (Romer, Jamieson, & Aday, 2003). If TV news viewing cultivates a “mean world” view, then it also should cultivate affluenza-style materialism and its symptoms, leading to another hypothesis.

Further, even though several research projects quoted in the literature review (Buerkel-Rothfuss & Mayes, 1981; Lee et al., 2016; Oprea & Kühne, 2016; Rossler & Brosius, 2001) suggest that program type may mitigate or even eliminate cultivation effects, especially for audience members who seek out television news programming (Chory-Assad & Tamborini, 2001; Lull & Dickinson, 2018; Reimer & Rosengren, 1990), it generally is better to suggest a positive association between variables rather than forecast the absence of one. This is especially valuable regarding cultivation theory, which asserts a positive relationship with effects (such as a mean world view or a devotion to materialism) driven not by program type but by hours of viewing.

Hypothesis 2: Heavier overall news viewing will correlate positively with participants’ feelings on how important it is to be rich, satisfaction about their household income, and general emotional state.

This work also poses, as a research question, whether manner of viewing, traditional television versus online streaming, matters in the connection between hours of viewing and affluenza.

Methods

The above hypotheses and research question were by addressed using secondary data analysis. Three well-respected, large-scale surveys were analyzed. Specifically, H1 and H2 were tested using the European Social Survey (ESS) and then replicated in the Longitudinal Study of American Youth (LSAY). Finally, the research question was examined using data from Eurobarometer 82.3. The specifics of each dataset now will be discussed.

European Social Survey

The ESS is a cross-national survey of more than 20 European countries conducted by the European Science Foundation. The first ESS was conducted in 2002, and it has been conducted every two years since then. A very large number of peer-reviewed, academic articles have been published from ESS data. The current study uses data from the seventh round of the ESS (i.e., 2014) covering 15 European countries and with a total sample size

of 28,221. The researchers conducted multiple regressions utilizing TV viewing as a predictor, along with age, education, income, and religiosity. Those independent variables were tested separately against the affluenza variables: important to be rich, financial worry, life satisfaction, and mental state. The same multiple regressions were run on television news viewing.

Measures. The items from the ESS were used to create two independent variables (i.e., overall television viewing and news viewing), three dependent variables (i.e., importance of being rich, dissatisfaction with income, and general emotional state), and numerous control variables.

Independent Variables. Overall television viewing and news viewing were both measured using single items that were asked as part of the ESS. For overall television viewing, the respondent was asked to estimate how much television he or she watched during the average weekday. Respondents answered on an 8-point scale ranging from “no time at all” to “more than three hours” in half-hour increments ($M = 3.94$; $SD = 2.04$). The item measuring television news viewing was asked in the same manner and used the same scale ($M = 1.94$; $SD = 1.33$).

Dependent Variables. For H1 and H2, we examined three dependent variables from the ESS. The first independent variable dealt with individuals’ perceptions about the importance of being rich. While affluenza is a latent variable, which cannot be directly tested, this item can be viewed as the strongest indicator or most important attribute of affluenza. It was measured with a single item from the ESS, which asked the participant to rate their level of agreement with the statement, “It is important to be rich and have money and expensive things.” The respondent answered on a 6-point scale, from “very much like me” to “not like me at all.” The variable was reverse-coded in all analyses to ease interpretation ($M = 2.66$; $SD = 1.26$). The second independent variable dealt with individuals’ perceptions of their current household income. This variable was measured using a single item which asked the participant to judge their income on a 4-point scale, ranging from “living comfortably on present income” to “very difficult on present income” ($M = 1.84$; $SD = 0.75$). The final independent variable was created using six items from the ESS to assess individuals’ overall emotional state. The scale included items that asked the respondent to rate how often he or she feels various emotions, such as loneliness or happiness. All items were answered on a 4-point scale, ranging from “almost none of the time” to “almost all of the time.” Negative emotions were reverse coded and the six items were averaged (Cronbach’s $\alpha = 0.76$; $M = 3.34$; $SD = 0.51$).

Control variables. In order to limit the possibility of a spurious association between the variables of interest, numerous control variables were included in the analyses. This included education ($M = 3.70$; $SD = 1.82$),¹ age ($M = 47.74$; $SD = 18.41$), gender (51.4% female), religiosity ($M = 4.87$; $SD = 1.71$),² and household income ($M = 5.72$; $SD = 2.76$).³

Longitudinal Study of American Youth

The LSAY dataset was used to replicate the findings from the ESS data. The LSAY is a national survey funded by the National Science Foundation that examines the development of student attitudes toward achievement in math and science. While the LSAY provides an impressive longitudinal dataset (i.e., following multiple cohorts of school age kids for many years), the current study used the data in a cross-sectional manner, looking at only one cohort ($N = 2,829$).

Measures. A total of four variables were used in the analyses from the LSAY. The two independent variables looked at media use (i.e., television viewing and news viewing), and the two dependent variables measured affluenza and the individuals' emotional state.

Independent Variables. The LSAY includes 13 items asked about individuals' viewing of specific television genres and/or programs. All items were answered on a 3-point scale, with 1 being equal to "Never," 2 equaling "1–2 times per week" and 3 being "3 or more times per week." These items were used to create two variables. The first variable took the mean of all 13 items to create a total television viewing variable ($M = 1.60$; $SD = 0.30$). The second variable took the mean of two items asking about individual's viewing of television news programs ($M = 1.60$; $SD = 0.54$).

Dependent Variables. Both of the dependent variables were measured using single items from the LSAY. The first item, measuring affluenza, asked the respondent to judge how important it is to have lots of money. This was answered on 3-point scale, ranging from "not important" to "very important" ($M = 2.35$; $SD = 0.60$). The second variable meant to examine the participants' emotional state. This was measured using one item that asked respondents to rate how strongly they agree with the statement, "I feel like a failure." Respondents answered on a 5-point scale ranging from "strongly agree" to "strongly disagree" ($M = 4.10$; $SD = 0.98$).

Eurobarometer

The final dataset used in the current study was the Eurobarometer, which was used to address RQ1. Like the ESS, the Eurobarometer is a long running multinational survey of Europeans' attitudes and opinions. Since 1970, Eurobarometer has monitored public opinion in the European Union. Internationally recognized research institutes conduct large face-to-face interviews on behalf of the European Commission, the EU Directorate General of Communication, or the European Parliament (Leibniz Institute for the Social Sciences, 2018). The Eurobarometer is

normally collected twice a year and started in 1973. This study used data from Eurobarometer 82.3 from November 2014 (European Commission, 2015). The total sample size for this particular data collection was 33,662.

Measures. A total of five variables were used in the analyses from the Eurobarometer. Eurobarometer 82.3 used face-to-face interviews in each of the European Union member states, using a multi-state random sample. In each household, the respondent was drawn at random using the “closest birthday rule.” Respondents had to be at least fifteen years of age and have sufficient command of the national language to respond to the questions. The surveys were done from August 11 to Nov 17, 2014. There were 33,662 respondents and 749 variables.

The two independent variables looked at the mode in which individuals view video content (i.e., via television and via streaming service). An affluenza-related outcome was the only dependent variable from the Eurobarometer. Finally, variables for social class and age were used as controlled variables.

Independent Variables. The two independent variables were each measured using single items. The first item asked how often respondents watch television on a TV set. The respondents answered on a 6-point scale, with 1 being the highest value (i.e., everyday) ($M = 1.32$; $SD = 0.96$). The second item asked respondents how often they watched television via the Internet. This item was answered on the same scale ($M = 4.88$; $SD = 1.73$). Both variables were reverse-coded for ease of interpretation.

Dependent Variables. Affluenza was indirectly measured by measuring the proxy variable, financial satisfaction. Participants were asked, on a 4-point scale, how satisfied they were with the financial situation of their household. The data was coded, with 1 being equal to “very high” and 4 being equal to “very bad.” This item was also reverse-coded ($M = 2.64$; $SD = 0.75$).

Control Variables. Finally, age and social class were controlled in order to limit the possibility of a spurious association between the variables of interest. Ages ranged from 16 to 99, with a mean age of 46.38 years ($SD = 18.47$). Participants were also asked to report their perceived social class on a 5-point scale, ranging from “working class” to “the higher class of society” ($M = 2.26$; $SD = 1.02$).

Results

The heart of the affluenza claim is the connection between TV viewing and materialistic values. Hypothesis 1 stated television viewing would lead to affluenza and affluenza-related feelings. This was tested in the ESS data by constructing three

regression models predicting participants' feelings on how important it is to be rich, how they feel about their household income and their general emotional state.

In all cases, as shown in Table 1, overall television viewing had a significant effect on the outcome variable in the direction supporting both H1 and the overarching argument about affluenza. After controlling for age, gender, household income and religiosity, television viewing resulted in a stronger belief that it is important to be rich ($b = 0.04$, $SE = .00$, $p < .05$).

This finding is the most direct test of the affluenza argument and demonstrates that materialistic views are associated with the amount of television watched. Additionally, television viewing was associated with both dissatisfaction with one's household income ($b = 0.02$, $SE = .00$, $p < .05$) and a less positive emotional state ($b = -0.01$, $SE = .00$, $p < .05$). While these are not direct tests of the affluenza claim, dissatisfaction with one's life and depression are seen as symptoms of affluenza and act as additional indicators of television's relationship with affluenza.

Hypothesis 2 sought to examine the impact of a specific type of programming on affluenza. Specifically, it was argued that television news viewing would follow the same pattern on affluenza and affluenza-related responses as overall television viewing, namely greater viewing would yield more affluenza-oriented answers. This hypothesis was tested using the same three regression models used to test H1 and was largely rejected. News viewing resulted in a weaker belief in the importance of being rich ($b = -0.02$, $SE = .00$, $p < .05$), meaning that people who watched more television news content were less likely to value the pursuit of money and material possessions. Additionally, news viewing was not a significant predictor of either dissatisfaction with one's income ($b = 0.00$, $SE = .00$, $p = .81$) or overall emotional state ($b = 0.00$, $SE = .00$, $p = .31$).

Table 1
Regression Models for H1 and H2 from ESS Dataset

	Importance of being rich			Dissatisfaction with household income			General emotional state		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Education	-.01	.00	-.02	-.04	.00	-.10	.01	.00	.03
Age	-.01	.00	-.19	.00	.00	-.01	.00	.00	-.03
Gender	-.35	.02	-.14	-.01	.01	.00	-.12	.01	-.12
Religiosity	-.05	.00	-.07	-.03	.00	-.06	.00	.00	.00
Income	.03	.01	.06	-.13	.00	-.47	.04	.00	.19
TV Viewing	.04	.01	.06	.02	.00	.05	-.01	.00	-.04
News Viewing	-.02	.01	-.02	.00	.00	.00	.00	.00	.00
<i>R</i> ²		.059			.272			.070	

OLS regression models predicting importance of being rich, dissatisfaction with household income, and general emotional state. Bolded values are significant at $p < .05$.

While a null finding should not be construed as complete refutation of H2, it can be seen as supporting the overarching argument of this research. Specifically, it demonstrates that television news viewing has different, unique effects on affluenza and affluenza-related feelings than overall television viewing.

To provide further credence to our findings, the results for H1 and H2 were replicated in a second dataset, the Longitudinal Study of American Youth. The findings were similar to that of the ESS. Overall television viewing had a positive effect on affluenza ($b = 0.31$, $SE = .07$, $p < .05$) and no effect on life satisfaction ($b = -0.10$, $SE = .10$, $p = .29$). News viewing, on the other hand, had a negative effect on affluenza ($b = -0.10$, $SE = .07$, $p < .05$) and a positive effect on life satisfaction ($b = 0.23$, $SE = .06$, $p < .05$).

Finally, this research sought to understand if changes in how individuals view television content might affect affluenza (i.e., the research question). Using the Eurobarometer data, it was found that the mode of viewing had divergent effects on affluenza – measured via the proxy of satisfaction with financial situation in the household. Specifically, as shown in Table 2, viewing television content on the Internet had a significant, positive effect on financial satisfaction ($b = 0.04$, $SE = .00$, $p < .05$), while viewing television content in a more traditional manner resulted in a significant, negative effect on financial satisfaction ($b = -0.004$, $SE = .00$, $p < .05$).

Discussion and Conclusions

This study aimed to explore whether TV news viewing differed from overall television viewing in correlating positively with affluenza values and symptoms. Contrary to cultivation effects, the results went in the opposite direction of the anticipated extension of cultivation into consumerism. While overall television viewing generally correlated with all the affluenza variables, television news viewing generally had no effect or a small inverse effect. The findings demonstrate that

Table 2
Regression Model for RQ1 from Eurobarometer Dataset

	Financial Satisfaction		
	<i>B</i>	<i>SE B</i>	β
Age	.00	.00	.06
Social class	.19	.00	.27
Television content on the Internet	.00	.00	.00
Television content on on television	.04	.00	.10
R^2		.084	

OLS Regression model predicting financial satisfaction. Bolded values are significant at $p < .05$.

affluenza variables strongly correlate with overall television viewing, which is not surprising, given past links found between heavy television viewing and materialism (affluenza). Nevertheless, there are implications and items that are worth noting about this research.

Studies on materialism/consumerism date back to the late 1970s and continued through the 2010s. During this span, technology has greatly changed television. When earlier studies were conducted in the 1970s and 1980s, broadcast networks dominated the television landscape. There was little competition from cable networks, even though cable television was creeping into more and more homes. The number of cable channels has significantly increased during the 2000s and after, dramatically increasing viewing options, including entertainment content (Medoff & Kaye, 2017). Greater access to more television entertainment content, including the proliferation of streaming content, likely adds to heavier overall television viewing (Shagrir, 2017).

Technology has changed since earlier studies; but in terms of traditional television screen viewing and affluenza, television viewing still has the same influence over the audience. However, when the audience is more active and selects content for streaming to devices, as shown in the research question, no such correlation is seen.

With the proliferation of cable networks comes an array of television programs. Research has indicated that there is a connection between affluenza and specific television genres (Buerkel-Rothfuss & Mayes, 1981; Cooper-Chen, 1994; Hayward, 1997; Lee et al., 2016). Many television programs, such as the *Real Housewives* franchise on the Bravo network, center around wealthy and affluent people. There are also reality programs that deal with finding love, alongside countless television movies centering on romance and that “happy ending.” These types of programs could contribute to viewer’s feelings about themselves and finding romance.

Though this work started with cultivation theory, the findings challenge some of the basic assumptions of that theory. Cultivation theory focused on violence as the central message of television, but this research flows from a growing body of work looking at “buy stuff” as a pervasive message. Cultivation theory further assumes that effects depended only on the amount of television viewing, but this research found a significant role for audience selection of program content. This research adds to the suggestion to rethink cultivation theory based on expanded media viewing options and active audience selection options that make the theory obsolete (Katz & Fialkoff, 2017).

Morgan, Shanahan, and Signorielli (2015) defended the central tenets of cultivation theory as holding firm, despite the successive technological changes presented by VCRs, cable TV, DVRs, and internet delivery, claiming the theory ties into a key component of human behavior, storytelling. This research casts doubt on those cultivation theory defenses.

Secondary analysis has both strengths and weaknesses. One strength is that it allows researchers to explore large databases for new connections. One weakness is that the data gathered by others may not be in the form that one would prefer, if one designed an original survey. For instance, it would have been desirable to have

further ESS questions on financial dissatisfaction. It also might have been useful if a happiness-related question was not in both life satisfaction and mental state sections. One also must take into account Trentmann's (2016) critique of affluenza as being "dubious history" that does not recognize the value of goods in working well and not just fulfilling emotional needs or status functions.

Nevertheless, the ESS provides a valuable multi-nation, multi-culture dataset for testing affluenza hypotheses. Future research should break down TV viewing into more distinct program types such as dramas, comedies, reality shows, telenovelas, and soap operas—and test each against measures of materialist values and life dissatisfaction. Furthermore, the Eurobarometer correlations also suggest the necessity of checking TV viewing in the traditional environment versus online streaming often on portable devices.

Notes

1. Education was measured with a response set of 25 different education categories to accommodate the educational systems of all the different countries. The 25 categories were reduced to 8 categories, based on the coding schema of the ESS, that act as an ordinal measure.
2. Religiosity was measured using a three-item scale, which asked the respondent to say how often they engage in religious acts, like going to church and praying (Cronbach's $\alpha = 0.84$; $M = 4.87$; $SD = 1.72$).
3. Household income was measured with a single item. Participants were asked about their household income. Their income was then coded into one of 10 categories based on the income distribution in the individual's country.

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Cultural Trait Vs. Personality Trait: Predicting the Appeal of Korean Entertainment among Asian Viewers in Singapore, Taiwan, and Hong Kong

Jinhee Kim, Hye Kyung Kim, Sojung Kim, and Shu-Fang Lin

This research explores transnational consumption of Korean entertainment among Asian viewers. To explain the appeal of Korean entertainment, this research focuses on mixed response of two opposing states (e.g., laughing and crying) that are induced, and examines the theoretical framework of personality trait (need for affect) vs. cultural trait (naïve dialecticism). Results from a survey ($n = 745$) reveal that mixed response mediates the positive association between naïve dialecticism (not need for affect) and the appeal. Findings are discussed regarding a cultural trait that predicts Asian viewers' gratification from experiencing culturally fit emotions that fulfill central cultural (vs. personal) goals.

Korean entertainment (K-entertainment) has been popular across the globe since the late 1990s, particularly in Asian countries, which is referred to as the *Korean Wave*. Notably, K-drama was the second most popular Korean cultural product in a recent survey conducted in Asian countries ($N = 4,200$) after Korean cuisine (Korean Ministry of Culture, Sports and Tourism & Korean Foundation for International Culture Exchange, 2017). Previous research has predominantly focused on U.S. or European media content as an exemplar of popular

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entertainment; however, few studies attempted to explain the appeal of other types of entertainment messages, particularly those based on Asian cultural origin. This research attempts to fill this gap by providing theoretical reasons for the appeal of K-entertainment among Asian viewers that help extend the scope of entertainment research.

Some previous studies explained the appeal by focusing on portrayals of Confucian values featured (e.g., family, sacrifice, and respect for the elderly) that may increase cultural proximity (e.g., Jung, 2009) and on attractive/professional/young characters along with modernized background that may fulfill the viewers' desire for economic success (e.g., Shim, 2006). However, apart from these content characteristics, no research has addressed viewers' subjective experiences, particularly mixed response while viewing K-entertainment. Examining this type of mixed responses may offer theoretical insights into a better understanding of the mechanisms that lead to distinct entertainment gratifications.

K-entertainment as a cultural product is characterized by great mixed responses of two opposing affective states. For instance, viewers often feel sad and cry while watching comedies; they may also feel amused and laugh while watching serious dramas. A simultaneous experience of positive and negative affect in audience behavior has also garnered Western scholars' attention (e.g., Larsen, McGraw, & Cacioppo, 2001). Accordingly, personality traits, particularly need for affect (NFA) in pursuit of strong positive and negative affect, were often predictors that explain the appeal of mixed response (Bartsch, Appel, & Storch, 2010; Maio & Esses, 2001).

Although NFA is a useful conceptual tool, prior research on mixed response has neglected the cultural dimensions of understanding nuanced entertainment gratifications. To explain the appeal of mixed response in Asian cultures, this research introduces naïve dialecticism (ND) as a cultural trait, shared among Asian populations, that represents unique beliefs embracing contradiction, unexpected change, and holism (Peng & Nisbett, 1999; Spencer-Rodgers, Williams, & Peng, 2010). By addressing the role of ND, this research extends the current understanding of why Asians are attracted to K-entertainment content that prompts mixed response.

NFA and ND as related traits may predict entertainment gratification derived from mixed responses. However, we further argue that the underlying theoretical mechanisms of these two traits can be understood distinctly in the context of Asian viewers' K-entertainment consumption: NFA fulfills personal goals, whereas ND fulfills cultural goals. Specifically, we predict that ND, rather than NFA, would more aptly explain the appeal of K-entertainment among Asian viewers because mixed responses may provide the viewers with culturally fit emotional experiences (De Leersnyder, Kim, & Mesquita, 2015; Tamir, Schwartz, Oishi, & Kim, 2017) that realize the central cultural (vs. personal) goals of harmony, balance, and moderation. We expect that the current research may address the importance of cultural influences that shape viewers' unique gratification derived from transnational entertainment consumption. This research can also offer practical guidance on the development of entertainment messages that induce multiple opposing emotions,

particularly targeting Asians, who comprise approximately 60% of the world population.

Mixed Response that Explains Asian Viewers' Gratification from K-Entertainment

Media researchers have proposed different gratifications that viewers obtain from entertainment consumption. Early work focused on enjoyment, but recent research from Oliver and Bartsch (2010) encompasses appreciation. According to the authors, appreciation is a state in which viewers are inspired, feel moved, and are motivated to elaborate on the message and to seek truth; in particular, mixed response has been associated with appreciation (Oliver & Bartsch, 2010). For example, drama genres may induce sadness by featuring the death of a loved one; however, these messages also evoke positive affect (e.g., hope, courage) and questions of human poignancy. Appreciation is often compared with enjoyment that emphasizes viewers' pleasure- and amusement-seeking motivation, including liking, sensory delight, and suspense (Vorderer, Klimmt, & Ritterfeld, 2004). The two-factor model of enjoyment vs. appreciation (Vorderer & Reinecke, 2015) can explain favorable experiences related to a wide range of entertainment content.

Previous research often regards suspense—the process of thrill, fear, and relief that poses emotional challenge (Bartsch & Hartmann, 2017; Vorderer et al., 2004)—as belonging to enjoyment because suspense concerns hedonistic needs, such as escape from boredom (Bryant & Zillmann, 1984). However, suspense is not always associated with enjoyment, and is unexpectedly often associated with appreciation (Oliver & Bartsch, 2010). Indeed, recent relevant work has treated the concepts of enjoyment and suspense differently (e.g., Bartsch & Hartmann, 2017).

Mixed response may be associated with suspense gratification based on excitation-transfer theory (Zillmann, 1971, 2006). Specifically, arousal induced by negative affect from the first scene may be transferred into the subsequent arousal induced by positive affect from the second scene (or vice versa), and these combined arousals may amplify the overall suspense experience. Relatedly, disposition theory (Raney, 2003) specifies that viewers may be distressed by witnessing their liked protagonists in a great danger and may hope for good outcomes for the protagonists and bad outcomes for their disliked opponents; the viewers may also feel relieved when the protagonists restore justice.

Although mixed response may predict appreciation and suspense as entertainment gratification, this research further hypothesizes that mixed response will also predict enjoyment gratification among Asian viewers who consume K-entertainment. Asians tend to believe that pure, prolonged positive affect is undesirable and unhealthy (Leu, Wang, & Koo, 2011). Regarding the relationship between positive and negative affect, Asians also tend to believe that the two are

not opposing/contradictory — but rather inseparable/complementary — with a blurred distinction between them (Uchida & Kitayama, 2009).

Previous research often operationalized mixed response as (a) the co-existence of positive (e.g., happy) and negative (e.g., sad) affect (Oliver, Hartmann, & Woolley, 2012), (b) ambivalent affect (e.g., an index of items, such as surprise, interesting, and being moved) (Bartsch et al., 2010), or (c) unique physical response relevant to meaningful affect (e.g., an index of items, such as lump in a throat, tears crying, and goose bumps) (Oliver et al., 2012). We operationalize mixed response as the co-occurrence of opposing states by including mixed physical response (e.g., laughing and crying) along with the response listed in (a). Thus, our operationalization of mixed response is different from previous operationalizations and is relevant to testing the context of contradiction of the two opposing affective and physical elements as well as the unexpected changes between them.

H1: Higher mixed response will be associated with greater enjoyment, appreciation, and suspense through exposure to K-entertainment.

In the next section, we introduce NFA and ND, which are two enduring, long-lived, and stable traits that are associated with sensitivity to emotion-eliciting entertainment content, which may result in intensified experience of mixed emotions.

NFA as a Personality Trait

NFA represents an individual's needs (a) to approach messages that elicit strong emotions or (b) to seek the experience of strong positive and negative emotions by viewing affect-laden messages (Bartsch et al., 2010; Maio & Esses, 2001). NFA also reflects individual's beliefs that strong emotions are beneficial to shape subsequent judgment, that understanding one's emotions and those of others is important, and that experiencing emotions from uncertain and unstructured contexts is tolerable. Although the original conception of NFA includes the avoidance dimension, we do not address it because it can be interpreted as either suppression or avoidance of emotional experience (Bartsch et al., 2010).

NFA has often been explored in the context of selective exposure. For example, the association between NFA and willingness to view happiness-inducing or sadness-inducing films over non-emotional films was positive (Maio & Esses, 2001). This result suggests that NFA is a need to approach media content that is laden with positive or negative emotions. Relatedly, Oliver and Raney (2011) reported positive associations between NFA and each of the two motivations underlying entertainment consumption: hedonic motivations that represent a search for pleasure and excitement, and eudaimonic motivations that represent a search for meaningfulness and personal growth. These results imply that NFA may be a key variable that prompts motivations to approach entertainment content that induces positive, negative, and further mixed states.

NFA has also been explored as a need to seek the experience of strong positive and negative emotions while viewing emotion-laden content that is given or manipulated. For example, Bartsch et al. (2010) showed that high levels of NFA were associated with strong negative (e.g., sad, angry, fearful) and further ambivalent (e.g., surprised, being moved, interested) affective responses from viewing horror and serious drama. Furthermore, NFA was also associated with appreciation (*not* enjoyment), when viewers evaluated their emotions experienced (i.e., meta-emotion) while viewing these negatively valenced films. Interestingly, the ambivalent affect was associated with negative (*not* positive) affect and with enjoyment/appreciation positively. The authors suggested that ambivalent affect may be experienced by reappraising negative affect positively rather than by activating positive and negative affect concurrently. Similarly, Appel and Richter (2010) showed that high levels of NFA facilitated absorption experience into emotional narratives, which, in turn, enhanced persuasion outcomes by heightening beliefs that are relevant to the information presented in the narratives.

Collectively, K-entertainment should provide gratifying experiences for Asian viewers with high NFA because they are more receptive to experiencing a wide range of emotions, appraising negative emotions experienced positively, and be open to uncertainty than viewers with low NFA.

H2: Higher NFA will be associated with greater enjoyment, appreciation, and suspense through exposure to K-entertainment.

ND as a Cultural Trait

ND prevalent in Asian cultures reflects individuals' unique perception of change and contradiction (Spencer-Rodgers et al., 2010). First, regarding change, Asians tend to believe that reality keeps changing reversely or cyclically (vs. linearly). The future is impossible to predict because numerous elements in the world are complexly interrelated. A negative state may turn into a positive state (and vice versa) and these oppositional changes may continue endlessly (Ji, Nisbett, & Su, 2001). Second, regarding contradiction, Asians tend to believe that reality is full of contradiction. The simultaneous and sequential co-existence of any two opposing elements may signify harmony, balance, and moderation rather than conflict, contradiction, and antagonism (Peng & Nisbett, 1999). Resolution of the two opposing elements is not necessary, and the truth is located somewhere in the middle. Finally, these beliefs about change and contradiction characterize Asians' holistic thinking (Nisbett, Peng, Choi, & Norenzayan, 2001). Any two opposing elements (e.g., yin and yang) that compose the whole are closely inter-connected, and all, not just some, elements are needed to construct the universe.

We may apply these three principles of ND to the consumption of entertainment media. First, Asians may feel comfortable with unexpected changes from positivity to negativity (and vice versa), and may even prefer these changes; however, no previous research has directly tested this claim in the domain of emotional experience. Second,

Asians also tend to experience the co-occurrence of positive affect and negative affect frequently and to prefer this mixed state (Kim, Seo, Yu, & Neuendorf, 2014; Kitayama, Markus, & Kurokawa, 2000; Miyamoto, Uchida, & Ellsworth, 2010). Intriguingly, Asians experience mixed emotions even in positive events (e.g., receiving a good grade) because they may cause social disruption (e.g., fear of upsetting others) or because a bad event may follow a good event (Miyamoto & Ma, 2011). Thus, in Asian cultures, positivity and negativity are interrelated inextricably. The need for both elements constituting the whole may explain the appeal of K-entertainment content that often induces a mixed response.

ND has been examined primarily in cross-cultural research contexts, and related findings have consistently shown that ND is significantly higher among Asians than among European Americans (Spencer-Rodgers & Peng, 2018); however, individuals within a culture can also exhibit elements of multiple cultures. Thus, the level of ND may not be uniform among Asians, and within-culture differences in ND should also be considered beyond simple Western vs. non-Western comparisons (Craig & Douglas, 2006). We predict that viewers with high NFA would 1) evaluate the mixed emotional experience of consuming K-entertainment as pleasurable and delightful, 2) view positive affect and negative affect as mutually dependent states that can co-exist meaningfully, and 3) tolerate increased uncertainty that results from unexpected changes.

H3: Higher ND will be associated with greater enjoyment, appreciation, and suspense through exposure to K-entertainment.

Culturally Fit Affect that Leads to Viewers' Gratification

This study further models the relationships among the two traits (NFA/ND), mixed response, and the three gratifications to shed light on the cultural (vs. personal) goals that can be fulfilled by entertainment consumption. We differentiate the two related traits as personality (NFA) vs. culture (ND). Personality traits are defined as "characteristic patterns of thought, emotion, and behavior," of an individual (Funder, 2001, p. 198), whereas cultural traits are defined as characteristic patterns in thought, emotion, and behavior of a culture. Culture represents socially transmitted ideas or knowledge structures about the world, including norms, values, or beliefs that are *shared* by members in a given cultural group (Chiu & Hong, 2007).

We claim that ND, rather than NFA, better explains the appeal of K-entertainment among Asian viewers. According to the theoretical framework of cultural regulation of emotion (Mesquita, Leersnyder, & Albert, 2014), we regulate our emotional experiences to be aligned with dominant cultural goals, because doing so results in rewarding outcomes that fulfill those goals, and ultimately promotes psychological well-being. Specifically, members of a culture regulate their emotions in accordance with culturally fit emotions that "enable people to navigate the intricacies of their social environments in a coordinated fashion" (Mesquita, Boiger, & De Leersnyder, 2016, p. 31; see also Tamir et al., 2017). We argue that mixed

responses serve as culturally fit emotional experiences for Asian viewers, enabling them to fulfill their central cultural mandates, and thus derive desired gratification from K-entertainment.

Previous research showed that experiencing negative emotions and mixed emotions may have beneficial outcomes in Asian cultures. For example, experiencing socially engaging negative emotions (e.g., guilt) that may promote relatedness with other family members predicted Koreans' well-being (De Leersnyder et al., 2015). Similarly, experiencing both positive and negative affect at a moderate frequency was associated with fewer physical symptoms (e.g., headache, profuse sweating) in Japan (Miyamoto & Ryff, 2011). The mixed emotions may be beneficial because they are culturally desirable and thus help Japanese achieve cultural goals of balance and harmonious integration.

Indeed, Tsai, Knutson, and Fung (2006) claimed that the affect to which individuals strive tends to be shaped more by culture (operationalized as interpersonal goals of influence vs. adjustment) than by affective personality (operationalized as extraversion and neuroticism). Consequently, K-entertainment as a cultural product may attract Asian viewers with high ND (vs. NFA) because K-entertainment allows them to experience culturally fit emotions, and thus to realize central cultural mandates of harmony, balance, and moderation.

To test this idea, we conceptualize NFA/ND as needs to seek the experience of strong positive and negative emotions while viewing K-entertainment. Viewers with high NFA/ND are more likely than viewers with low NFA/ND to get involved with emotion-laden entertainment content, are sensitive to emotional cues conveyed in the content, and intensify emotional response from viewing the content. Thus, these traits may prompt a mixed viewer response. Subsequently, these strong mixed responses induced will be associated with great enjoyment, appreciation, and suspense when consuming K-entertainment. However, the mediation effect involving ND will be stronger than that of NFA because mixed response is a culturally-fit emotional state that is congruent with ND for Asian viewers.

H4: Mixed response will mediate the positive association between ND and each of the three gratifications and, to a lesser degree, the positive association between NFA and each of the three gratifications.

Methods

Overview

Online surveys were conducted in Taiwan, Singapore, and Hong Kong that share, to some degree, similar cultural traits based on the Chinese legacy. A professional survey company, Qualtrics, was commissioned to collect data. The company and its partners recruited the target participants from online panels, administered surveys, and monitored survey responses. Questionnaires were prepared in English and in

Chinese. The English version was developed by the first author, and one of the co-authors who is bilingual in English and Chinese translated the English version to Chinese. To validate this translation, a translator who is also bilingual in English and Chinese back-translated the Chinese version to English (Brislin, 1970). After negotiating discrepancies between translation and back-translation, a final Chinese version was completed by the co-author. The English version was used in Singapore, and the Chinese version was used in Taiwan and Hong Kong.

Participants and Procedures

Online panel members aged over 18 were invited via emails, and 627, 473, and 405 members in Singapore, Taiwan, and Hong Kong, respectively, attempted to participate by clicking the survey link. Only those who hold either citizenship or permanent residency in each country were permitted to participate in the study. Additionally, participants should have watched at least two K-dramas and three episodes of each drama during the previous 12 months to ensure that they are familiar with K-dramas and can recall their recent K-drama experiences specifically.

Participants who had passed these screening questions were asked to name one K-drama title that they had watched most recently (Oliver & Bartsch, 2010 for a similar procedure). Subsequently, keeping in mind the title named, participants rated retrospectively their emotional experiences and gratification. The final sample included 745 participants with 37.17 average age ($SD = 10.59$): 248 in Singapore (58.5% females), 248 in Taiwan (57.7% females), and 249 in Hong Kong (55.8% females). Approximately 63.5% of participants worked in professional, administrative, and clerical areas; about 70.5% of them were either two-year or four-year college graduates.

Participants watched K-dramas through the channels of TV (74.8%), Internet streaming service (69.8%), or free download (46.8%). During the previous 12 months, the average frequency of watching K-drama measured using a scale ranging from 1 (*Not at All*) to 7 (*All the Time*) was high ($M = 5.13$, $SD = 1.31$). The number of K-dramas that participants had watched full episodes during the same period was 6.61 ($SD = 8.13$). Participants had been watching K-drama for about 6.18 years ($SD = 4.36$).

Measures

Mixed Affective Response. Participants rated their affective responses after viewing the K-drama named. The responses were measured using 28 items adapted from Barrett and Russell (1999), and Kim et al. (2014) on a scale ranging from 1 (*Not at All*) to 7 (*Very Much*).

The scree plot from an exploratory factor analysis using principal axis factoring and Promax rotation ($\kappa = 4$) suggested two factors that explained 44.67% of the total variance. After dropping items that had cross-loadings or low loadings across the factors, final items pertaining to each of the two factors were averaged to create an index. The first factor

consisted of 11 positive-affect items (*happy, excited, joyful, pleasant, funny, elated, content, amused, hilarious, relaxed, and lively*; $M = 4.75$, $SD = 1.08$, $\alpha = .93$) and the second factor consisted of nine negative-affect items (*gloomy, low, depressed, stressed, upset, tense, downhearted, melancholy, and sad*; $M = 2.96$, $SD = 1.14$, $\alpha = .90$).

To estimate mixed affective response, we obtained the minimum value (MIN) of positive affect and negative affect ($M = 2.87$, $SD = 1.07$). MIN is a widely used criterion to calculate the co-existence of the two opposing affects (e.g., Miyamoto et al., 2010; Oliver et al., 2012). According to the logic of MIN, if individuals report relatively high scores for *both* positive affect and negative affect, then MIN is high. In contrast, if individuals report a relatively low score for either of them, then MIN is low.

Mixed Physical Response. Participants also rated their physical responses after viewing the K-drama named. The responses were measured using eight items adapted from Algoe and Haidt (2009) and Silvers and Haidt (2008), on a scale ranging from 1 (*Not at All*) to 7 (*Very Much*). The same factor analysis suggested two factors that explain 54.53% of the total variance. The two items that had cross-loading across the factors (i.e., *warmth in chest, high energy*) were dropped. The first factor consisted of two positive physical response items "light and bouncy" and "laughter" ($M = 4.48$, $SD = 1.41$, Spearman-Brown coefficient = .78) and the second factor consisted of four negative physical response items: "tears crying," "lump in throat," "muscles tensed," and "increased heart rate" ($M = 3.61$, $SD = 1.30$, $\alpha = .80$). The MIN of the two physical responses was also calculated to estimate mixed physical response ($M = 3.37$, $SD = 1.28$).

Mixed affective response and physical response were combined as *mixed responses* ($M = 3.14$, $SD = 1.03$, Spearman-Brown coefficient = .73) for subsequent analysis, although their discrepant results were reported (Footnotes).

Enjoyment, Appreciation, and Suspense from Viewing K-Drama. Participants rated the degree to which they experienced enjoyment, appreciation, and suspense while watching the K-drama named, using 13 items adapted from Oliver and Bartsch (2010). An initial exploratory factor analysis revealed two factors because of a high correlation between the measurement items of "enjoyment" and "appreciation" ($r = .72$, $p < .001$). However, given that these two concepts are qualitatively and conceptually distinct, we treated each of them as a distinct factor. Accordingly, we requested three factors and they explained 61.45% of the total variance. Items pertaining to enjoyment (e.g., "I had a good time while watching this K-drama;" $M = 5.33$, $SD = 1.07$, $\alpha = .82$), appreciation (e.g., "This K-drama left me with a lasting impression;" $M = 4.95$, $SD = 1.14$, $\alpha = .88$), and suspense (e.g., "This K-drama was suspenseful;" $M = 4.54$, $SD = 1.32$, $\alpha = .80$) were averaged to create an index.

Naïve Dialecticism. ND was measured using 11 items adapted from Choi, Koo, and Choi (2007), and others (Miyamoto & Ma, 2011; Spencer-Rodgers, Srivastava, et al., 2010) on a scale ranging from 1 (*Strongly Disagree*) to 7 (*Strongly Agree*). Sample items were "It is more desirable to take the middle ground than go to

extremes” and “I believe a bad thing tends to follow a good thing.” These items were averaged to create an index ($M = 4.51$, $SD = .82$, $\alpha = .78$). The scree plot from an exploratory factor analysis suggested one factor.

Need for Affect. NFA was measured using NFA short scale from Appel, Gnambs, and Maio (2012) on a scale ranging from 1 (*Strongly Disagree*) to 7 (*Strongly Agree*). Sample items were “I feel that I need to experience strong emotions regularly” and “It is important for me to be in touch with my feelings.” These five items were averaged to create an index ($M = 4.94$, $SD = .87$, $\alpha = .69$).¹

Results

To test our hypotheses, we combined the data from the three countries, although we reported discrepant results in the three countries (Footnotes). Zero-order correlations of six focal variables were shown (Table 1).

Main Effects of Mixed Response, NFA, and ND

To predict the appeal of K-drama as a function of mixed response and the two traits, three multiple hierarchal regression analyses pertaining to each of the three outcomes were conducted (Table 2). For each analysis, demographic variables and the characteristics of the K-drama named (Step 1), the two traits (Step 2), and mixed response from the K-drama (Step 3) were entered as predictors.

Results showed that young (vs. old) viewers predicted all three outcomes positively and significantly. No gender difference was found except for the appreciation outcome. Viewing K-dramas frequently and most of the episodes of the K-drama named predicted all three outcomes positively and significantly. Finally, viewing the drama named a while ago (vs. recently) predicted greater enjoyment. Relevant to the hypotheses, mixed response (H1) from viewing the K-drama also predicted all three outcomes positively and significantly.² Likewise, both NFA (H2) and ND (H3)

Table 1
Zero-Order Correlations among Focal Variables

	1	2	3	4	5
1. Naïve Dialecticism					
2. Need for Affect	.40***				
3. Mixed Response	.25***	.17***			
4. Enjoyment	.18***	.29***	.19***		
5. Appreciation	.23***	.31***	.38***	.72***	
6. Suspense	.16***	.18***	.45***	.42***	.61***

Note. *** $p < .001$

Table 2
Predictors of the Gratifications of K-Entertainment Recently Viewed

	Enjoyment	Appreciation	Suspense
Step 1			
Age	-.10**	-.07*	-.11**
Gender (Female = 1)	.03	.08*	-.02
K-drama use frequency	.33***	.32***	.17***
How recently viewed	.08*	.06	.06
Number of episodes viewed	.15***	.18***	.18***
R^2	.16***	.17***	.09***
Step 2			
Naïve Dialecticism (ND)	.08*	.14***	.11**
Need for Affect (NFA)	.22***	.22***	.11**
ΔR^2	.07***	.09***	.03***
Step 3			
Mixed Response	.08*	.29***	.39***
ΔR^2	.01*	.08***	.13***
F	27.00***	45.94***	31.37***
N	744	744	744

Note. Entries are standardized β . * $p < .05$, ** $p < .01$, *** $p < .001$.

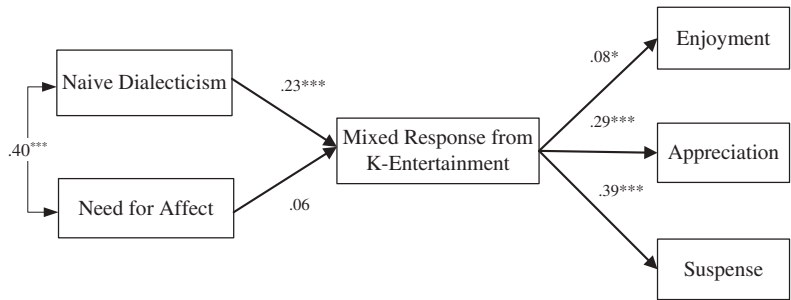
predicted enjoyment, appreciation, and suspense of the K-drama positively and significantly. Thus, H1, H2, and H3 were supported.

Mediation Effects of Mixed Response

H4 predicted that mixed response would mediate the positive relationship between ND as well as, to a lesser degree, NFA and each of the three outcomes. To test this hypothesis, a series of indirect effect analyses pertaining to each of the three outcomes were performed using AMOS 24 (Figure 1). A bootstrapping procedure ($N = 5,000$) and 95% bias-corrected confidence intervals were employed. The five variables in the first step of the regression analyses were controlled in these analyses. First, the path coefficients (Figure 1) showed that ND (*not* NFA) predicted mixed responses positively and significantly. The subsequent path coefficients also revealed that mixed responses predicted all three outcomes positively and significantly.

Second, specific indirect effects of ND vs. NFA on each of the three outcomes through mixed response were examined (Table 3). Results showed that mixed response³ mediated the relationships between ND and each of the three outcomes positively and significantly.⁴ In contrast, mixed response did not mediate the relationships between NFA and each of the three outcomes significantly. Finally, a series of contrast tests that examined the statistical differences in the strength of indirect effects ND vs. NFA for each of the three outcomes were performed using

Figure 1
Path Coefficients of the Mediation Model of Mixed Response



Note. * $p < .05$, *** $p < .001$. Entries are standardized β . The five control variables and the direct effects were not pictured for a parsimonious presentation. Covariance among error term of the three gratification outcomes: enjoyment and appreciation = .56 ($SE = .04$), $p < .001$; appreciation and suspense = .52 ($SE = .04$), $p < .001$; enjoyment and suspense = .33 ($SE = .04$), $p < .001$.

Table 3
Indirect Effects of ND Vs. NFA on the Gratifications of K-Entertainment through Mixed Response

Indirect Effect Paths	Bootstrapped		95% Bias-Corrected CI	
	Effect (<i>b</i>)	SE	LL	HL
Naïve Dialecticism (ND)				
(1) ND → Mixed Response → Enjoyment	.023*	.01	.003	.052
(2) ND → Mixed Response → Appreciation	.09***	.02	.057	.136
(3) ND → Mixed Response → Suspense	.14***	.03	.089	.201
Need for Affect (NFA)				
(4) NFA → Mixed Response → Enjoyment	.005	.01	−.001	.022
(5) NFA → Mixed Response → Appreciation	.02	.02	−.008	.056
(6) NFA → Mixed Response → Suspense	.03	.03	−.013	.086
Indirect Effect ND minus Indirect Effect NFA				
(1) minus (4)	.02*	.01	.002	.047
(2) minus (5)	.07*	.03	.017	.124
(3) minus (6)	.11*	.04	.027	.188

Note. * $p < .05$, *** $p < .001$

user-defined commands in AMOS 24. Results confirmed that the indirect effects of ND on enjoyment, appreciation, and suspense, respectively, through mixed response were stronger than those of NFA.⁵ Thus, H4 was supported.

Discussion

The purpose of this study was to explore whether a) mixed response of the two opposing states can explain the appeal of K-entertainment, and b) a cultural trait (ND), rather than a personality trait (NFA), explains the appeal better among Asian viewers through the framework of culturally fit emotion. Results revealed that mixed response, NFA, and ND predicted enjoyment, appreciation, and suspense of the K-entertainment, respectively. Importantly, mixed response mediated the positive association between ND (*not* NFA) and each of the three gratifying outcomes, suggesting that strong mixed response as a specific mechanism that explains the appeal of K-entertainment among Asian viewers.

Theoretical and Practical Implications

This study has several theoretical implications. It provides a theoretical framework of ND that explains the appeal of K-entertainment characterized by a mixed response — as a means of realizing Asians viewers' central cultural goals — to be differentiated from the theoretical framework of NFA that primarily focuses on achieving personal goals. The results suggested that mixed response reflects culturally fit emotional experience for Asian viewers to experience a good balance between positivity and negativity, to fulfill cultural mandates of realizing harmony and moderation, and to derive gratification.

This research suggests the importance of cultural goals triggered by ND that may govern subsequent K-entertainment consumption, but little is known regarding these goals in the extant literature. Western scholars identified seeking pleasure, excitement, meaningfulness, information utility, and personal control, among others, as personal goals of consuming entertainment messages (Bryant & Vorderer, 2006). While seeking personal control can be a central cultural goal in Western cultures, seeking relationship harmony with close in-group members can be a central cultural goal in Asian cultures (Kitayama, Karasawa, Curhan, Ryff, & Markus, 2010). Future research may expand the extant literature by exploring how these cultural goals can be fulfilled through entertainment consumption.

The findings also suggest that existing entertainment theories may benefit from considering the framework of ND and mixed response. For example, because excitation-transfer theory discusses two separate arousing moments *regardless of their valence*, the effect of ND on suspense through mixed response might indicate a subtype of excitation transfer that implies unique cultural meanings. Likewise,

disposition theory may benefit from considering the changes of viewers' opposing emotional experiences during their exposure to entertainment narratives. Even if viewers may experience *distress* momentarily, this negative emotion may create a motivation for the viewers to keep engaging with the narrative with *hope*, and the viewers may feel *relieved* when the resolution is reached (Nabi & Green, 2015).

This research also addresses important questions regarding the multi-faceted nature of mixed response that can be addressed in future research. An interesting question is whether two blended opposing affects reflect simultaneous mixed response, whereas two juxtaposed opposing affects reflect sequentially experienced mixed response (Nabi & Green, 2015). For example, people feel both happy and sad at the same time, while watching a particular scene in an emotionally powerful Italian film, *Life is Beautiful* (Larsen et al., 2001). In contrast, a popular Korean comedy film, *Miracle in Cell No. 7*, portrays a laugh-inducing scene (e.g., playing a trivial/silly game) immediately after a tear-inducing scene (e.g., heart-wrenching separation of daughter from father). Indeed, our results from the multiple mediation model (Footnote 5) imply that mixed physical (vs. affective) experience may better tap into changes from positivity to negativity (or vice versa). Future work is warranted to better understand the difference between simultaneously and sequentially experienced mixed responses.

This research also offers practical implications for entertainment media industries. Entertainment content producers predominantly concentrate their energy on storylines, content themes, socio-cultural values of interest, attractive actors, production techniques, soundtracks, and the like to create popular content that attracts viewers. These characteristics reflect the substance of the entertainment *content* per se. However, the current findings clearly suggest that to enhance viewers' gratification, the subjective emotional experiences that viewers obtain by consuming the entertainment content – particularly mixed response – must be considered.

Accordingly, the entertainment industry may benefit from considering entertainment narratives' emotional flows that are defined as "the evolution of the emotional experiences during exposure to a media message, which is marked by a series of emotional shifts" (Nabi & Green, 2015, p. 7). Emotional flow may involve one or more affective shifts, including 1) from positive to negative (or vice versa), 2) from positive to positive (e.g., from feeling happy to feeling excited), and 3) from negative to negative (e.g., from feeling sad to feeling angry). Additionally, when distributing messages that induce a mixed response, entertainment distributors should consider the enduring traits of target viewers, such as NFA and ND, to ensure that their entertainment content matches the viewers' desired gratification with regard to the actual experience of mixed responses.

Limitations and Future Research

Several study limitations are noteworthy. First, participants named titles of K-drama watched most recently. Although this procedure allowed respondents to report their retrospective experiences freely while watching K-dramas, future research may select

popular K-dramas as stimulus materials and replicate our findings in an experimental setting to establish causal relationships. Second, we assessed mixed response retrospectively by averaging memory-based self-reported data that may include erroneous recall, because participants may have preferentially remembered the readily accessible emotional episodes in their mind (Robinson & Clore, 2002). Specifically, respondents may have recalled “peak” and “end” emotional moments within the whole episodes that they had watched, as these particular (peaks/ends) rather than averaged moments have been identified as readily accessible to respondents’ minds (Kahneman, Fredrickson, Schreiber, & Redelmeier, 1993). Future research would benefit from collecting mixed response continuously in real time (Alwitt, 2002) by using innovative measurement tools (e.g., recording facial expressions).

Third, we addressed K-drama genres broadly without exploring possible differential effects of subgenres or happy/sad resolutions of K-dramas on mixed responses. Because previous research suggested that serious drama, rather than comedy, may induce a greater mixed response (Kim et al., 2014), future research should explore the effect of sub-genres of dramas, other genres (e.g., horrors), or resolutions on mixed response. Lastly, because only K-drama viewers were eligible to take part in this study, we had relatively low response rates, although our sample characteristics closely resembled those of K-drama Asian audience (i.e., more females than males, more adults aged over 30 than aged 18–29; Yang, 2012). As we combined the data from three Asian countries to examine the effects of shared cultural traits associated with entertainment gratification, this approach allowed us to better generalize our theoretical claim across these nations. However, we observed some different patterns among these countries, possibly due to the small sample size for or other cultural factors specific to each country. Additional work should address these possibilities with improved response rates and larger sample sizes in each country, in addition to identifying other unique cultural traits relevant to entertainment gratifications.

Future research may expand the current scope and collect data from other Asian countries (e.g., Vietnam) – as well as from South American (e.g., Chile) and Western countries (e.g., France and the U.S.) – to understand the appeal of K-entertainment among a global audience through the utility of ND and NFA. Perhaps NFA, rather than ND, might explain the appeal better in non-Asian countries because mixed response may be more closely related to the fulfillment of personal goals (e.g., understanding strong emotions) in these countries. A cross-cultural research that directly compares Asian viewers with Western viewers who consume K-entertainment may provide better explanations on such speculations.

Conclusion

With the increasing popularity of K-entertainment around the globe (including Western European countries recently), more scholarly attention should be given to understand the appeal of non-Western entertainment because existing theoretical explanations of media entertainment are skewed toward a Western focus. Guided by the notion of culturally fit

emotions, this research demonstrates that cultural traits, beyond personality traits, shared by Asian viewers explain the appeal of K-entertainment characterized by mixed responses. This study thus provides practical directions for the future of the Korean Wave by suggesting distinct explanations of the importance of emotional narratives in K-entertainment across the globe.

Notes

1. Although the reliability was within a minimally acceptable range (Cortina, 1993), it was relatively low. Asian respondents may have responded differently to the scale that was developed and tested with Western samples.
2. Mixed affective (vs. physical) response alone ($\beta = -.06, p = .097$) was not a significant predictor of enjoyment.
3. Relating to footnote 2, mixed affective (vs. physical) response alone did not mediate the positive association between ND and enjoyment ($\beta = .01, p = .07$).
4. When the data was split by country, the indirect effect on enjoyment was not significant in Singapore and Taiwan, as the positive association between mixed response and enjoyment did not reach significance, $\beta_{\text{Singapore}} = .06, p = .36$; $\beta_{\text{Taiwan}} = .03, p = .59$. In the case of Taiwan, the indirect effects on the three outcomes were not significant, as the positive association between ND and mixed response did not approach significance, $\beta = .11, p = .10$.
5. To examine whether mixed physical (vs. affective) response was a stronger mediator, a multiple mediation model using PROCESS (Model 4) (Hayes, 2018) was tested. Results confirmed that mixed physical (vs. affective) response was a statistically stronger mediator for all three outcomes. The strength of indirect effects differed significantly between the two responses: $b_{\text{enjoyment}} = .14, SE = .03, 95\% \text{ CI } [.090, .215]$; $b_{\text{appreciation}} = .17, SE = .03, \text{ CI } [.106, .240]$; $b_{\text{suspense}} = .06, SE = .03, \text{ CI } [.006, .126]$.

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A 'Presidential Look'? An Analysis of Gender Framing in 2016 Persuasive Memes of Hillary Clinton

Rebecca Coates Nee  and Mariana De Maio 

A persuasive campaign with elements of propaganda was waged on social media against Hillary Clinton during the 2016 U.S. presidential race, partially through a Russian-financed effort to discredit her. This study analyzed doctored images (memes) posted on Twitter about Clinton during the general election campaign. Through qualitative content analysis, researchers sought to identify whether negative memes reflected socially constructed gender stereotypes. Results show gendered frames used in memes against Clinton were based on female biological/physical traits (weak, ill, unattractive), anti-feminine traits (dishonest, untrustworthy), and negative female politician traits (dictatorial, unqualified) that were incongruent with the perceived role of the presidency.

Traditionally spread via broadcast or print media, persuasive content is increasingly appearing on social media (Kollany, Howard, & Woolley, 2016; Wasike, 2017). Although many persuasive campaigns are being conducted by brands and advertisers, political actors also are attempting to influence people's opinions through posts, hashtags, images, and links to content that may not be verifiable. In terms of communication concepts, propaganda is a subset of persuasion (Jowett & O'Donnell, 2006). While both types of communication attempt to influence others, Jowett and O'Donnell (2006) note that propaganda differs from persuasion in purpose, transparency, and type. They distinguish propaganda as less transparent than persuasion, with the goal being to manipulate behavior, often through identity concealment and control of information. A propaganda message is typically associated with negativity and dishonesty.

Evidence has mounted of propaganda posted on social media during the 2016 U.S. presidential campaign to portray Hillary Clinton negatively. The U.S. intelligence community, U.S. Department of Justice, and a Republican-led Senate committee each have concluded that Russian operatives orchestrated a social

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media campaign against Clinton to denigrate and harm her while supporting Donald Trump (Congress, U.S., 2018; Department of Justice, 2018; Director of National Intelligence, 2017). Targeted social media memes, or altered images, were one method that foreign actors used as information warfare to target Clinton, according to an indictment of Russian operatives issued by the U.S. Special Counsel's office (Department of Justice, 2018). For this study, *memes* are operationally defined as the online spread of jokes, rumors, videos, and pictures, which often contain user-created derivatives, mashups, parodies, and Photoshopped images (Shifman, 2015). Often considered a promising form and driver of digital activism and online political participation (Jenkins, 2006; Poell, Abdulla, Rieder, Woltering, & Zach, 2015; Shifman, 2015), visual memes are being designed by political operatives on a global scale to spread negative or false information about opposition candidates or issues (Bayerl & Stoyanov, 2016; Freelon & Karpf, 2015; Kharroub & Bas, 2016; Kollany et al. (2016).

The current study seeks to explore the extent to which negative persuasive visual memes about Clinton incorporated gender stereotypes of females and female politicians during the 2016 general election cycle. Gender stereotypes are used as a framework for this analysis because Clinton was the first female presidential nominee and historically has been the subject of gender-based stereotypes in past campaigns (Carlin & Winfrey, 2009; Carroll, 2009). Emerging research on the 2016 campaign also has shown gender and prescribed beliefs that about female norms were factors in voter's negative perceptions of Clinton (Cassese & Barnes, 2018; Hale & Grabe, 2018; Visser, Book, & Volk, 2017). In her book reflecting on the presidential election, Clinton (2017) herself asserted that "sexism and misogyny played a role in the 2016 presidential election" (p. 114). In one network news interview during the 2016 general election, for example, Trump said Clinton didn't have a "presidential look" (ABC News, 2016), a comment often interpreted as a reference to her gender. Scholars also have argued that socially constructed gender stereotypes favor males in leadership roles, particularly the presidency, because female norms are incongruent with societal characterizations of major political positions (Eagly & Karau, 2002; Heilman, 2001). Therefore, gender stereotypes may have been incorporated into negative social media memes against Clinton to underscore these differences.

Although no evidence has been presented showing that the Russian-backed campaign directly influenced the outcome of the 2016 election, social media content has become a persuasive factor in voting decisions. Most Americans (67%), report that they get at least some of their news through social media outlets (Shearer & Gottfried, 2017). Additionally, Pew researchers Duggan and Smith (2016) found that one-in-five social media users (20%) changed their view about a political or social issue because of something that they saw on social media during the 2016 presidential election cycle. Visual memes are the unit of analysis for the present study, because images often offer the viewer a more powerful and emotional way to construct reality than facts or textual information (Gamson, Croteau, Hoynes, & Sasson, 1992; Kharroub & Bas, 2016). Twitter was chosen for this study because it was the social media platform most used publicly by voters,

candidates, and journalists to post election-related topics in real time (Isaac & Ember, 2016). Through a qualitative content analysis, the purpose of the current study is to analyze the extent to which gender stereotypes were incorporated into negative visual memes about Hillary Clinton to dissuade voters from supporting her.

Literature Review

Memes and Political Participation

Political bots, or automated scripts run by political actors, are increasingly used to manipulate public opinion over social media by pushing out persuasive content, according to researchers with the Oxford Institute on Computational Propaganda, which has been tracking political bot activity globally since 2012 (O.I.I., Computational Propaganda, [n.d.](#)). Kollany et al. (2016) found that bot activity reached an all-time high during the 2016 U.S. general election, with pro-Trump bots outnumbering pro-Clinton bots by 5:1 by election day. Bot-generated content is also spread through human operated accounts that act as trolls, disrupting political conversations online with the intent to influence opinion. The activities of these bots and trolls during the 2016 campaign fit Jowett and O'Donnell (2006) definition of propaganda in that the identity and source of the message sender was typically concealed.

The dynamics of political persuasion in offline contexts has been explored significantly (e.g., Gutmann & Thompson, 2004; Thorson, 2014), but social media have changed the way that people connect to discuss political opinions. When looking at how social media users connect with others online, Diehl, Weeks, and Gil de Zúñiga (2016) found that even apolitical consumption of news on social media leads to political persuasion, especially when apolitical users engaged in discussion disagreement. Memes entered the political arena in the U.S. during the 2012 presidential campaign in the form of user-generated content poking fun at the candidates' gaffes, particularly during live televised debates. In a study of memes posted on Twitter in response to an Obama/Romney debate, Freelon and Karpf (2015) found that non-traditional actors were most responsible for spreading humorous memes about Romney's statements. Not every viral meme is funny, however, or produced by non-traditional political actors.

The visual/textual format, which can be easily shared and altered, is well-suited for political persuasion and propaganda campaigns. Kharroub and Bas (2016) found that image-based posts on Twitter provoked and promoted political activism during the 2011 Egyptian revolution because images provide symbols that are more relatable than text-based messages (Kharroub & Bas, 2016). Seo (2014) analyzed altered images shared on Twitter during the November 2012 Gaza conflict and found that they served as powerful propaganda tools. Both sides of the Gaza conflict, for example, posted images of citizens killed by opposing forces. Bayerl

and Stoykov (2016) looked at how memes are used to challenge the power of, otherwise, seemingly untouchable institutions. They found that while a meme's life is relatively short with limited reach, the meme can have significant negative effects on the people and institutions being targeted. Duchscherer and Dovidio (2016) studied negative memes that stereotyped Asians. Results of their experiment showed that participants who were more supportive of stereotyping found the memes more socially acceptable and less objectionable than other participants. Those who hold traditional stereotypes, therefore, may be more susceptible to persuasive content presented in memes.

Gender Stereotypes and Leadership

Both persuaders and propagandists may attempt to promote behavioral change within individuals by using strongly held attitudes as anchors in their campaigns (Jowett & O'Donnell, 2006). Prior research has shown that certain voters hold prescriptive beliefs about women and female leaders (Eagly & Karau, 2002; McThomas & Tesler, 2016; Schneider & Bos, 2014). These beliefs originate from socially constructed gender stereotypes that assign specific biological and character traits to men and women. From a biological standpoint, females are typically viewed as physically weaker than men (Parsons & Bales, 1955). Physical stereotypes emphasize men as strong and women as weaker, but attractive (Diekmann & Eagly, 2000).

The difference in perceptions regarding strength is one aspect that led to Eagly and Karau's (2002) theory that a role congruity prejudice exists toward female leaders, because of the cultural mismatch between the perceived demands of leadership and the stereotypes associated with women as the "weaker sex." Perceptions of health also can influence voters' beliefs about leadership traits. In their experiment, Spisak, Blaker, Lefevre, Moore, and Krebbers (2014) examined the so-called "attractiveness halo" of leadership preferences by showing facial images of males to participants. After manipulating health and intelligence facial cues, the researchers found that facial health positively affected perceived masculinity and became even more significant than intelligence in determining leadership potential. Because prescribed beliefs about health and strength may influence voters' views of candidates, the first research question is asked regarding biological stereotypes of females in the memes posted about Clinton.

RQ1: Did the negative memes posted about Clinton reflect gender stereotypes related to biological traits that were incongruent with the presidency?

Female Character Traits

Socially constructed traits also have been associated with males and females (Gough, 1964; Gupta, Turban, Wasti, & Sikdar, 2009; Terman & Miles, 1936). The Bem Sex Role Inventory (1974) placed males on an agentic scale (forceful, dominant, competitive, and assertive), while females are viewed on a communal scale (affectionate, compassionate, warm, and gentle). Other positive traits associated with women include honesty, trustworthiness, and being moral (Huddy & Capelos, 2002). These traits have been used to designate jobs as being masculine or feminine. Male positions, such as firefighters or managers, are seen as being more risk-taking and autonomous; female jobs—such as nursing or teaching—are considered relationship-oriented, nurturing traits (Cejka & Eagly, 1999; Heilman, 1983).

Even after more women began entering the workforce and holding managerial positions in the late 20th century, scholars found that gender stereotypes continued to favor males in powerful positions (Eagly & Karau, 2002; Heilman, 2001). Heilman's (2001) lack-of-fit model outlines descriptive and prescriptive beliefs about female leaders, both acting as barriers. Society's constructed beliefs about female traits do not fit well with leadership characteristics; but, when women behave in a manner more consistent with male leadership ideals, they are criticized for being incongruent with existing prescriptive expectations about gender roles (Koenig, Eagly, Mitchell, & Ristikari, 2011). Thus, a double-bind dilemma is created for women, because a positive quality perceived in a male could be seen as a negative in women (Schneider & Bos, 2014).

In a 2011 meta-analysis of leader stereotypes, Koenig et al. confirmed that leadership is still defined largely as a masculine construct. The authors concluded that these stereotypical perceptions pose a problem even for women who have outstanding qualifications to lead, because they "may have the burden of overcoming preconceptions that they are not well equipped to lead" (p. 22, para 3). The authors added that these pressures may cause women leaders to present themselves in a more androgynous manner so they are not considered too masculine or too feminine. Eagly and Karau (2002) noted, however, that some traits associated with communal attributes also could lead to the perceived goodness of women, thus mitigating some of the masculinity of the leadership role, particularly if the woman is characterized as warm and friendly.

In sum, the literature introduced here suggests that women aspiring to be leaders are simultaneously expected to possess a variety of expected traits, such as beauty, empathy, affection, warmth, assertiveness, and competitiveness, among others. However, being assertive or driven is inconsistent with appearing warm and compassionate. Thus, women who seek leadership positions may be more vulnerable than males to persuasive gendered campaigns against them. In relation to the memes posted about Clinton during the 2016 campaign, the next research question is then posed regarding character traits:

RQ2: Did the negative memes posted about Clinton reflect gender stereotypes related to character traits that were incongruent with the presidency?

Stereotypes of Female Politicians

When it comes to attaining the presidency, balancing agentic (male dominant) qualities with warmth and friendliness has been challenging for women. Although female heads of state have become more common among westernized democracies, women who run for higher office in the U.S. have long faced stereotypes, negative press portrayals, and the double bind of having to appear male while still being likeable (Finneman, 2015; Lawrence & Rose, 2010; Uscinski & Goren, 2011). Women who come across in media portrayals as agentic, or more assertive, are often the targets of prejudice because of the incongruity of the gender role (Meeks, 2012). In an analysis of news coverage of mixed-gendered races, Meeks (2012) found an emphasis on whether female candidates possessed stereotypical feminine traits of honesty, emotionality, and compassion, while the male candidates were described in terms of leadership, aggressiveness, and independence. Fears of terrorism after the September 11, 2001 attacks in the U.S. and stereotypes favoring a male's ability to handle national security issues have placed further obstacles in the way of women attaining the presidency (Lawless, 2004). These stereotypes can be even more difficult for the wives of politicians to overcome. Feminist scholars have argued that society views ambitious wives of prominent men negatively, because going outside their role as a wife violates established expectations and boundaries (Papanek, 1973). Women who cross this line are often viewed as domineering or "scheming concubines" for using their husbands' success to launch their own careers (Saxonhouse, 1992, p. 4).

Adding to the dilemma for women in politics is a subtype of stereotypes associated with female politicians that differs from female gender stereotypes. Schneider and Bos (2014) found that people do not ascribe the same stereotypical traits to women who run for office as they do for women in general. While stereotypes associated with male politicians are a subset of male stereotypes (ambitious, aggressive, strong), female politicians did not score high on female traits, such as honesty and integrity. Negative traits associated with female politicians include being dictatorial and aggressive (Schneider & Bos, 2014). Once again, the double bind is present for women who seek to run as men because they may be seen as inauthentic and in violation of female norms (Eagly & Karau, 2002; Meeks, 2012). Females were, however, associated with positive characteristics of being well-educated, qualified, confident, and hard-working. Table 1 summarizes gender stereotypes of females and female politicians based on the literature presented.

Gender Stereotypes and Hillary Clinton

Gender politics have been associated with Hillary Clinton even before her first campaign for president in 2008. Scholarship analyzing her treatment by the public and press during Bill Clinton's candidacy and presidency found that the media and voters had difficulty fitting her into the symbolic role of first lady (Gardetto, 1997;

Table 1
Summary of Socially Constructed Gender Stereotypes of Females and Female Politicians

Category	Themes
Biology/Physical Character traits	Weak, attractive, beautiful. Healthy (both genders). Passive, dependent, non-competitive, compassionate, kind, emotional, honest, warm, integrity, trustworthy, people skills
Negative female politicians traits (subtype)	Uptight, dictatorial, ambitious, aggressive, egotistical, tough, driven, assertive
Positive female politicians traits (subtype)	Well-educated, qualified, confident, assertive, well-spoken, hardworking

Source: Diekman and Eagly (2000); Eagly and Carli (2007); Eagly and Karau (2002); Heilman, Block, and Martell (1995); Huddy and Capelos (2002); Schneider and Bos (2014).

Winfield, 1997). Even after her subsequent election as a senator from New York, Clinton's favorable/unfavorable ratings have been correlated with voters' attitudes about gender. Those voters holding to more traditional gender role beliefs were least likely to view Clinton favorably, regardless of partisanship (Tesler & Sears, 2010).

Modern sexism is defined as a subtler form of overt sexism and centers around beliefs that women's claims of discrimination are unfounded overreactions (Swim & Cohen, 1997). McThomas and Tesler (2016) examined 2012 voter data to determine whether modern sexism beliefs influenced people's opinions about Hillary Clinton after she served as secretary of state. They found that people whose attitudes favored egalitarian views regarding gender rated Clinton most highly, even when compared to other popular Democrats. Conversely, those who scored highest on a modern sexism scale had the most negative views of Clinton. Paul and Smith (2008) also found evidence of subtle sexism in voter preferences for males over equally qualified female candidates, particularly in a general election scenario. The authors of that study concluded that gender bias was evident because voters frequently switched their preference to the male candidate in a general election contest, regardless of the voter's own party affiliation or gender.

Adding to the dilemma for female candidates is the growing evidence that shows candidates who conduct negative campaigns against their opponents are the most successful in getting elected (Geer, 2006; Mattes & Redlawsk, 2014). If females go negative, however, they could trigger gender stereotypes inconsistent with female characteristics of warmth and friendliness. Craig and Rippere (2016) tested this possibility in a survey regarding a hypothetical race for the U.S. House of Representatives. They found that the gender of the candidate making the attack did not play a significant role in voters' responses to negative ads. However, negative ads were effective. In some cases, shared gender and co-partisanship

were not enough to prevent a loss of support after being presented with negative information about a candidate (Craig & Rippere, 2016). Therefore, even female Democratic voters who were exposed to negative images of Clinton on social media may have been persuaded to vote against her, if they believed the narrative presented in the posts.

Research addressing gender and the 2016 campaign has shown that voters perceived Clinton as violating positive female norms, such as warmth and honesty (Hale & Grabe, 2018; Visser et al., 2017). In an analysis of 2016 voter data from the American National Election Studies, Cassese and Barnes (2018) found that sexist beliefs were influential among many white women, a majority of whom voted for Trump. Thus, the final research question is posed to determine the extent to which stereotypical beliefs about female politicians were present in the memes posted about Clinton.

RQ3: Did the negative memes posted about Clinton reflect female politician stereotypes that were incongruent with the presidency?

Method

To answer the research questions, the authors performed a qualitative content analysis (Lindlof & Taylor, 2017) on negative visual memes of Hillary Clinton that were posted to Twitter during the general election cycle. Coding categories were derived deductively from the prior research (as recommended by Beniot, 2011) regarding gender stereotypes and female leadership role incongruities. Because memes were the unit of analysis, images that had not been altered in some way (Photoshopping, text added) were not included in the sample during the coding process further described below.

Data Collection. The researchers gathered data through *Tweet Archivist*, a web-based Twitter analytics platform that has been used by other scholars studying political communication via Twitter (Boynton et al., 2014; Croeser & Highfield, 2014; Raynauld, Lalancette, & Tourigny-Koné, 2016; Raynauld, Richez, & Boudreau Morris, 2018). *Tweet Archivist* is used to search, archive, analyze, visualize, and export tweets based on a keyword or hashtag (Tweet Archivist, n. d.). *Tweet Archivist* does not have access to the historical records of all tweets ever tweeted. Rather, once a keyword is activated, *Tweet Archivist* collects and archives tweets that contain a mention of that keyword. Associated images are also captured with the tweets. *Tweet Archivist* rolls over each term to a separate database after 50,000 tweets are reached and hosts each set of tweets on its website. Images associated with each data set can be accessed and downloaded individually. All datasets of tweets collected related to the keyword are downloadable as a PDF or Microsoft Excel file.

For this study, the tweets containing the keywords “Hillary,” “Clinton,” and “CrookedHillary,” were archived from July 1, 2016 until the general election on November 8, 2016. Hillary or Clinton were used as the search term because people referred to her using both her first and last names. Because the framing of negative memes was being investigated, the term #CrookedHillary was included because it was the most common moniker used by Trump and his supporters to criticize Clinton. At the end of the collection period, researchers accessed each set of tweets through links provided on Tweet Archivist and downloaded the images associated with each set for further analysis.

Sample. Hillary or Clinton yielded 29 sets of 50,000 tweets for a total of approximately 1.45 million tweets. #CrookedHillary generated five sets of tweets for a total of 250,000 tweets. The number of images and memes associated with each set of 50,000 tweets varied, but typically ranged between 21 and 25. Therefore, 780 altered images and memes were analyzed.

Procedure. To answer the research questions, the authors reviewed all of the memes, looking for patterns that reflected the four primary areas of stereotypes associated with females (biological, traits) and female politicians (negative and positive traits) identified in the literature. Through an iterative process outlined by Lindlof and Taylor (2017), the authors identified the most prominent themes within each of the four categories of gender stereotypes, as shown in Table 2. The authors

Table 2
Themes Based on Gender Stereotypes in Twitter Memes about Clinton

Final Coding Categories	Meme Themes	Meme Examples
Biology/Physical	Weak, ill, unattractive	Coughing, stumbling, Parkinson’s disease, dementia, unable to stand on her own. Memes claimed her bodyguard was a medical doctor. Many memes were altered to make her appear wrinkled and unattractive.
Female character traits (reversed)	Dishonest, untrustworthy	Wicked witch, prison inmate, liar, Hillary for prison.
Negative female politician traits	Aggressive, dictatorial	Dangerous, “Just like a dictator she built her career on lies, fears, and division.” “She will destroy our country.”
Positive female politician traits (reversed)	Unqualified	Unfit to lead, “So many achievements, not a single person can name one.” “Too stupid, too criminal to be president.”

first worked on the coding scheme together, using 10 percent of the data. The two researchers then independently coded 20 percent of the memes to determine consistency of the coding themes. Differences were discussed until agreement was reached.

Table 2 presents examples of the most frequently observed themes of the negative memes against Hillary Clinton, based on an association with the four categories of female stereotypes (biological, characteristic traits) and female politicians (negative, positive traits). (Because of the large file size, sample images/memes will be made available as a supplemental file, upon request from the authors, or as a separate URL.)

Biological Weaknesses. Memes designed to reinforce the stereotype of females being biologically weak were readily apparent. Hillary Clinton was portrayed as weak, sickly, and needing to sit or lean against her bodyguards for support (see Figures 1–2 in supplemental file). Although she did suffer from pneumonia in September 2016, unfounded rumors and manipulated photos circulated throughout the four-month period, implying that she had Parkinson's disease, dementia, and was unable to stand on her own. Photoshopped images were made to look like her bodyguard was actually a medical doctor holding a Diazepam pen (used to treat seizures). This claim was unproven, according to Snopes, a fact-checking website (Snopes, 2016). Memes also were spread of her somewhat frequent coughing attacks (which she attributed to allergies before announcing she had pneumonia) and an unverified letter supposedly from her personal physician, claiming that Clinton had suffered from periods of blacking out and was diagnosed with dementia. Although Clinton did suffer from a concussion in 2012 related to a fall, no credible evidence was ever provided that she was still dealing with complications from that concussion in 2016.

One meme that appeared five separate times in a variety of iterations contained a photo that shows her being helped walking upstairs by two men (see Figure 3 in supplemental files). The occurrence was documented in photos on both Reuters and Getty websites on February 24, 2016 as she campaigned in South Carolina during the primary. The original Getty image photo caption reads: "Hillary Clinton slips as she walks up the stairs" (Getty, 2016); the original Reuters image photo caption reads: "Hillary Clinton ... loses her balance briefly" (Reuters, 2016). In subsequent posts of this photo, however, the image was altered and reappeared throughout the general election cycle, giving the appearance that she was routinely falling and could not walk on her own. In the majority of Photoshopped memes of Clinton in all categories, her image also was altered to make her appear wrinkled and overweight, thus countering the societal expectation of female beauty.

In answering RQ1, memes relating to the biological theme reflected gender stereotypes of females being weaker, but were inconsistent with ideals of feminine attractiveness. Therefore, from a biological perspective, Clinton was portrayed as too weak, unhealthy, and unattractive to be a leader. These attributes are incongruent with the role of the presidency.

Character Traits. Memes of Hillary Clinton did not, however, reflect positive female stereotypical character traits of being honest, trustworthy, and having integrity. The themes researchers identified most frequently regarding Clinton's character were dishonesty and untrustworthiness, crooked/criminal, dangerous, and liar (see Figure 3 in supplemental files). One image symbolized the wicked witch, showing her in all green holding a broomstick. Numerous others portrayed her behind bars, displaying the slogan familiar to Trump supporters: "Lock her up." In answering RQ2, therefore, Clinton was portrayed in a manner that was inconsistent with the more positive stereotypical female traits of being honest and trustworthy, which could have mitigated negative perceptions of female candidates. Therefore, this portrayal was inconsistent with the role of the presidency.

In answering RQ3, Clinton was portrayed in a sample of the memes as both aggressive ("I came here to destroy America") and dictatorial/ambitious ("Just like a dictator, she built her career on lies, fear, and division"), which are consistent with negative stereotypical traits of female politicians (see Figure 4 in supplemental files). As a side note, many of these altered images contained the Trump/Pence campaign logo, although it is unclear whether these images were formally connected with the Trump campaign. Memes were inconsistent with possible mitigating factors of being well-educated and qualified (see Figure 5 in supplemental files). For example, one altered image of her proclaimed: "Official: Clinton is 'unfit' to lead Americans." Another stated: "The only thing she's accomplished is avoiding prosecution" and one meme referred to her as "too stupid and too criminal to be president." Positive traits of female politicians (being qualified and educated) were not reflected in the memes. Instead, she was called stupid and unaccomplished. Thus, the prevalent themes presented regarding Clinton's character traits through these memes were incongruent with norms of the presidency and female leadership.

Discussion

The purpose of this study was to analyze the extent to which gender stereotypes were implemented as part of a persuasive visual social media campaign to denigrate Hillary Clinton during the 2016 general election cycle. The analysis shows that negative female biological gender stereotypes were prevalent in memes of Clinton, portraying her as weak or unhealthy, attributes which are incongruent with leadership ideals. Memes relating to Clinton's character traits were also incongruent with positive traditional female characteristics of honesty and integrity. The memes analyzed for this study did not show a kinder, gentler stereotype, one that could mitigate negative female stereotypes regarding the role of the presidency. Instead, memes depicted her as crooked, evil, and dangerous for America. Because of the extent of the Photoshopping and nefarious nature, the majority of the memes analyzed in this study appeared to at least be a subset of the organized persuasive social media campaign against Clinton, rather than generated by non-political actors.

The narrative of being overly agentic (aggressive, dictatorial) coincides with research from the 2008 primary that showed Clinton was portrayed with such strength that her feminine/relational characteristics were hidden (Carroll, 2009). In a 2016 study, psychological experts scored Clinton much lower on honesty-humility and emotionality traits compared to female norms (Visser et al., 2017). This finding underscores public perceptions of Clinton as being cold and calculating — all characteristics that were exploited in the social media memes studied here. Another study of the 2016 general election identified gender qualities *Reddit* posters assigned to Clinton and Trump (Hale & Grabe, 2018). A content analysis of visual images posted on the candidates' *subredits* showed that Trump was portrayed positively as possessing masculine, feminine, and gender-neutral leadership qualities, while Clinton was portrayed as masculine, but lacking in feminine and gender-neutral characteristics (Hale & Grabe, 2018).

These public perceptions can be traced back to Clinton's days as first lady, when media coverage presented her as a "new woman" — one preoccupied with power and lacking nurturing capacities (Gardetto, 1997). Winfield (1997) wrote that the American public and mass media could not come to terms with a multifaceted first lady who is "a supportive wife, a mother, a formidable corporate lawyer and politician as well as traditional lady" (p. 251). The somewhat paradoxical and newer narratives of Clinton being biologically weak, which is more of a female stereotype, were reinforced by her bout with pneumonia in September 2016 and the photograph of her brief stumble on stairs during the primary. The FBI investigation into her use of a private email server, re-opened days before the election, also underscored the theme of corrupt character traits being spread via social media posts and memes.

Having her own political ambitions may have framed Clinton as a "scheming concubine" as Saxonhouse observed about women who use their husband's careers to launch their own (1992, p. 4.). Thus, these long-standing perceptions of Clinton may have been reinforced through the 2016 campaign, which was far more nefarious than attacks on her during the 2008 primary, thereby influencing susceptible voters. As Paul and Smith (2008) found, voters hold to their traditional gender stereotypes during a general election more than in a primary matchup. Although Clinton won the popular vote in 2016, she failed to attract white voters without college degrees in several key Midwestern states (Bump, 2017). Previous scholarship has shown that whites without a college education are most likely to have more deeply rooted stereotypical beliefs regarding gender roles (Paul & Smith, 2008).

Clinton's experience as a senator and secretary of state also did not appear to mitigate the conspiracy theories and gendered stereotypes that were used against her in 2016 that instead portrayed her as unaccomplished and unfit to lead. Eagly and Karau (2002) noted that even when women are effective leaders, they are punished for their role violation by those holding traditional gender role beliefs, especially if the woman fails to exhibit female communal attributes.

Determining whether the sources of the memes analyzed were related to the Russian campaign is beyond the scope of this study and may be an impossible task because Twitter has since deleted many of the Russian-linked accounts and is aggressively suspending accounts suspected of being bots (Timberg & Dwoskin, 2018). Bots have the ability to force topics to trend on Twitter, which could lead people to perceive the trending topics and associated images as fact, further amplifying the persuasive effects online (Kollany et al., 2016).

Limitations and Conclusion

Limitations of this study include using only visual memes posted on just one social media platform. Further research could extend the dataset to other platforms and add a textual analysis. The authors focused on visual memes for this study because of the power of images to quickly project a stereotype or frame of reference on social media (Duchscherer & Dovidio, 2016; Kharroub & Bas, 2016; Seo, 2014). Experimental research also may be conducted to determine the covert and overt effects of these types of memes on the viewer and identify predictors of susceptibility to gender stereotypes spread on social media.

Gender is one of many factors that voters may have taken into consideration in the 2016 election, of course. The authors make no effort to generalize these findings to other elections or to determine what portions of the memes analyzed were part of the organized, persuasive campaign against Clinton. Nevertheless, this analysis is a first step in demonstrating how prescriptive beliefs about females and female politicians may have been used in memes to discredit Clinton in a way that is incongruent with the role of the presidency or female leadership (Eagly & Karau, 2002). Clinton was portrayed biologically as unattractive and weak, a negative theme consistent with sex role theory (Parsons & Bales, 1955), but not warm or friendly, which would reflect positive female gender characteristics (Bem, 1974) and possibly mitigate the negative impact of gender. Therefore, the memes analyzed here provide some evidence that gendered stereotypes were prevalent, on Twitter at least, in a pattern that may have hurt Clinton, especially among voters who held traditional gender role beliefs.

Individuals who already believed that women were weak and unfit for the job of president would be most susceptible to constructing reality in a way that matches these negative images and conspiracy theories about Clinton. Even other voters, who may have wanted to see more positive feminine characteristics in Clinton, were fed a narrative of corruption and deception about her — spread by an organized network of propagandists and automated Twitter accounts.

These findings are unique to this situation, however, because Clinton was a candidate with a long history of perceived gender role violations going back to her days as first lady. She also carried a considerable amount of political baggage associated with the Clintons. In the future, a different female presidential candidate

without such an ambiguous history may be better positioned to overcome gender barriers, especially now that the designation of “first woman nominee” has already been assigned. The fact that the public is now more aware of the spread of fake news stories, through bots, on social media, also may lead voters to become more discerning about persuasive content they see online.

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No potential conflict of interest was reported by the authors.

Supplemental material

Supplemental data for this article can be accessed [here](#).

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#SELFIES at the 2016 Rio Olympics: Comparing Self-Representations of Male and Female Athletes from the U.S. And China

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#SELFIES at the 2016 Rio Olympics: Comparing Self-Representations of Male and Female Athletes from the U.S. And China

Qingru Xu and Cory L. Armstrong

Social media provides athletes an efficient platform on which to build and maintain their online image. Applying the self-representation theory of Goffman (1959), this study explored the gendered differences between the self-portrayals of U.S. and Chinese athletes. Findings suggest that hegemonic gender norms still had a strong hold on Chinese athletes' self-disclosure, whereas minimal gender differences emerged between male and female U.S. athletes. Results suggested that cultural background had a substantial impact on self-representation for all participants. Although athletes might claim agency when presenting themselves on social media, the practice of self-portrayal should be examined within specific cultural contexts.

The 2016 Rio Olympic Games, dubbed "the most social games ever," inspired 1.5 billion interactions on Facebook and 75 billion total impressions on Twitter (Akhtar, 2016; Liu, 2016). In China, Sina Weibo—a Chinese Twitter-like social media platform—generated 630 million posts related to the Rio Olympics, yielding 183.9 billion impressions (Weibo Data Center, 2016). Compared to the television ratings drop for Olympic broadcasts (Dan, 2016; Porter, 2016), social media has emerged as an important access channel for Olympic audiences. In this sense, the worldwide popularity of social media has substantially changed the communication landscape in sport (Lupinetti, 2015).

As one important group of stakeholders in sport, athletes frequently use social media to share information and interact with fans (Sanderson & Kassing, 2011). In the National Basketball Association (NBA), 87% of players participated on at least

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one social media platform in 2016, while more than 70% of Chinese national athletes had personal Sina Weibo accounts in 2016 (Neely-Cohen, 2016; Wang, 2016). Researchers argue that social media tools grant athletes agency and autonomy when constructing an online identity, potentially counteracting their portrayals in mass media (Lebel & Danylchuk, 2012; Smith & Sanderson, 2015).

Previous studies on media representation have found that mass media tend to portray male and female athletes according to hegemonic gender expectations (e.g., Xu, Billings, & Fan, 2018). For instance, they usually emphasize the masculine traits of male athletes, such as strength and power, whereas the family relationships and physical attractiveness of female athletes are more likely to be highlighted (e.g., Coche & Tuggle, 2016). These strategies have been widely criticized for reinforcing male hegemony and marginalizing female athletes as *the other* in sport (Bruce, 2016).

Although numerous studies exist related to mass media representations of athletes, self-portrayal on social media is still an emerging area in sports communication. Shreffler, Hancock, and Schmidt (2016), for instance, examined 207 Twitter avatars of female athletes and suggested that athletic performance was the most frequently presented theme, challenging the stereotypes of female athletes in mass media. However, Geurin-Eagleman and Burch (2016) examined 800 Instagram posts by athletes and found that—compared to their male counterparts—female athletes tended to share more pictures taken in private settings, echoing stereotypical gender norms. Given these findings, whether self-representation on social media empowers female athletes or reinforces male hegemony is still debatable.

Although prior studies have found significant gender trends in athlete self-representation on social media, nearly all of them have focused on the social media profiles of U.S. athletes, with little or no attention devoted to Asian athletes. Given the social construction underpinnings of gender (see e.g., Butler, 2011), gendered self-portrayal could vary from one culture to the next. The current study addresses this gap by examining how athletes from China and the United States—two of the largest nation states with distinct histories, ideologies, and sport systems—constructed their identities on social media during the 2016 Rio Olympics.

Literature Review

Individuals tend to present themselves by highlighting characteristics that they personally value (Leary & Kowalski, 1990). As a practice of managing personal impressions, self-representation was initially proposed by Goffman (1959) in *The Presentation of Self in Everyday Life*, in which he asserted that human beings express their identities via verbal and non-verbal messages. Compared to non-verbal expressions, verbal messages are easier to manage during self-representation. In this sense, the advent of the internet has allowed users to construct and maintain self-portrayal with minimal or no non-verbal information, offering an efficient platform for controlling information disclosure (Papacharissi, 2002a).

Although individuals claim agency and autonomy when constructing their online images, self-representation can hardly be defined as a purely individual pursuit. Some researchers have argued that self-representation is a continual process of negotiation between (a) individual goals and (b) the perception of audience desires (Bortree, 2005; Leary & Kowalski, 1990), both of which might be heavily influenced by social context. For instance, living and competing in a highly hegemonic society, athletes might internalize patriarchal gender values and adjust self-portrayals to social expectations. Applying self-representation theory, the current study examined how U.S. and Chinese athletes differed in their gendered self-representation on social media in order to identify potential cultural influences on gendered self-portrayal.

Gendered Media Portrayals in Mass Media

The gendered portrayals of men and women in the mass media have been widely explored by scholars from multiple disciplines. Examining gendered representations in advertising, Goffman (1979) asserted that daily commercials captured the structural relationship between men and women. The concept of *ritualization of subordination* was proposed to capture the inferior status of women in advertisements. Smiling, knee bending, body arching, and head tilting—framing strategies frequently applied when depicting women—were categorized as operating indicators of submission and inferiority. Although Goffman's study was exploratory in nature, it offered valuable insights for investigating gender representation in the mass media.

Facial displays are another promising measure of gendered media representation. Archer, Iritani, Kimes, and Barrios (1983) conducted a series of studies—including three descriptive studies and two experiments—examining facial prominence across multiple contexts. The experiments pointed out that images with high facial prominence tended to trigger more positive evaluation in terms of ambition, intelligence, appearance, and more. The authors asserted that the emphasis on men's faces in the studies was consistent with the stereotypical idea that men were valued more for their minds and ideas, while women were more appreciated for the physical beauty of their bodies.

Even in recent decades, sport has remained a male-dominated social structure, often affording women only limited access (Broch, 2016). Sport communication studies have found that male and female athletes are often depicted according to gender stereotypes (e.g., Bruce, 2016). Compared to male athletes, female athletes are characterized according to their relationships with others (e.g., mother, wife, or girlfriend) more often than their athletic ability (McGannon, Curtin, Schinke, & Schweinbenz, 2012). Some studies have uncovered, in a variety of cultural contexts, that female athletes are sexualized as objects of desire or infantilized as "girls" or "babies" (Jones, 2012; Kane, LaVoi, & Fink, 2013). Based on these findings, media representations of female athletes have often undervalued their athletic accomplishments.

However, other studies have discovered positive changes in gendered representation in sport media, especially during the Olympics. In the 2012 London Olympics, for the

first time, female athletes received more than half of the clock time and name mentions during NBC's primetime coverage (Billings et al., 2014). Based on a quantitative analysis of photographs and articles published by ESPN Women (espnW), Wolter (2015) found that female athletes, framed as serious and legitimate, were characterized by emotional strength and physical skill. In a study conducted in Australia, Xu, Billings, Scott, Lewis, and Sharpe (2017) reached similar conclusions. Despite these more empowering depictions, male dominance in sport has rarely been challenged, but these studies suggest that media representations of the Olympics may need further study.

Self-Representation in Media Studies

With the emergence of personal web publishing, individuals have had the opportunity to become media content producers, not merely consumers (Smith & Sanderson, 2015). Instead of being objects of portrayal, they can construct their own sense of self in a virtual community (Papacharissi, 2002a). Early online self-representation studies focused on personal home pages, blogs, and dating websites. Looking at how individuals used personal home pages to construct an online image, Papacharissi (2002b) found that they used both direct textual expression and indirect expression (e.g., hyperlinks and animation) to represent themselves. Ellison, Heino, and Gibbs (2006) explored various self-representation strategies that individuals used for their online dating site profiles; they found that the goal of finding a romantic partner led to a negotiation between impression management and authentic self-disclosure. Although these studies did not directly examine gender difference, they established a foundation for investigating individual online self-representation.

Since 2010, the number of social media users has increased at an unprecedented rate; as of 2017, the number worldwide is 2.46 billion (Statista, 2018). This popularity stems from the opportunity that social media sites create for individuals: to portray an idealized self online. Applying the framework of evolutionary psychology, Tifferet and Vilnai-Yavetz (2014) explored gender differences in Facebook usage with respect to family relationships, status, risk-taking, and emotional expression; they found that self-representation was consistent with traditional gender norms. In an earlier study, Manago, Graham, Greenfield, and Salimkhan (2008) also examined gender difference in self-portrayal on MySpace and found that female self-objectification was pervasive in their self-disclosure; they speculated that the pressure of social comparison on social media intensified the patriarchal gender values that were typically in play in their offline lives.

Athlete Self-Representation on Social Media

In the domain of male-dominated sport, female athletes have been situated in a paradox of gender identity (Emmons & Mocarski, 2014). On the field, female

athletes are expected to show a high level of competitiveness and tenaciousness, but this expectation conflicts with the traditional perception of femininity as gentle and elegant (Emmons & Mocarski, 2014). In terms of athlete self-representations on social media, Lupinetti (2015) examined how amateur female figure competitors presented themselves on Instagram, finding that participants enjoyed posting athletics-related pictures on their social media sites because the posts would encourage other women to be physically fit.

Emmons and Mocarski (2014) analyzed the visual self-representation of professional athletes on Facebook, suggesting that, although some patriarchal values persisted, both male and female athletes preferred wearing uniforms, and very few sexualized photographs were posted. Given these progressive findings in the literature, some scholars have asserted that social media enables athletes to construct their own images online, potentially diminishing the hegemonic notions that have plagued female athletes and reframing the landscape of sport for women (Lebel & Danylchuk, 2012).

However, some scholars have argued that patriarchal gender norms still have a strong impact on athlete self-representation. Applying Goffman's theory of self-representation, Smith and Sanderson (2015) examined the Instagram feeds of 27 professional athletes; they found that—compared to male athletes—female athletes were more likely to post photographs that emphasized their breasts, a clear indicator of self-objectification. More recently, Gainor (2017) examined how gender expectations were exhibited via professional athlete self-representation. By examining *head tilting, clothing, knee bending, smiling*, and other indicators, the author suggested that both male and female professional athletes were pressured to follow gender expectations. In this sense, regardless of their involvement in athletic activity, professional athletes still adopt widely-accepted gender roles.

Thus, studies related to the gendered self-representation of athletes provide contradictory findings. In addition, nearly all studies on this topic have focused on gender differences within a single culture (i.e., the United States), failing to consider the potential cultural effects on athlete self-portrayal. This study will fill the gap by introducing a variable of national origin to explore gender differences in athlete self-representation across China and the United States.

Selecting China and the United States in Examining Athlete Self-Representation

China and the U.S., the two largest economies, have two of the largest populations in the world. Both countries also have very large presence and are perennial powers in different Olympic sports that are consummate with their sports market size. Given these factors, a cross-cultural comparison of male and female athletes' social media posts in these countries, emerges as a topic of interest, especially considering the substantial differences that the two countries claim in terms of culture, history, and ideology.

According to Hofstede (2001), collectivist ethos is ingrained in the Chinese society, with the group's well-being is established as the best guarantee for the individual; the United States, however, is marked with an intense desirability of individualism, in which the individual's well-being is viewed as the root of the country's greatness. Prior studies demonstrated that the individualism-collectivism dichotomy exerts great influences on a variety of social expressions across the two countries, such as advertising appeals (Zhang & Gelb, 1996), emotion-evoking (Stipek, 1998), and social lofting (Earley, 1989).

The contrast between capitalism and socialism marks as another salient difference between China and the United States. In socialist China between 1949 and 1979, the party-state held a sovereign claim on individual bodies, in which gender differences were largely eliminated by forcing women to surrender femininity (Xiong, 2015). Over a long time, Chinese people were encouraged to become social *producers* rather than resident *consumers* to serve the needs of industrialization (Xiong, 2015). Although the practice of a market economy system was introduced by the Chinese government in the 1980s, the socialist ideology still has an impact on governing the daily life in contemporary Chinese society.

Mediated gender portrayals can also vary by a country's developmental stage in gender equality (Paek, Nelson, & Vilela, 2011). According to the Gender Development Index, which measures the gender gap between men and women in health, knowledge, and living standards, the United States is listed as one of the top 10 most advanced countries, while China is ranked as No. 90 among 188 countries in the world (United Nations Development Programme, 2016). In the sports domain, Title IX of the Education Amendments was passed in 1972 to protect individuals from sexual discrimination in educational institutions that receive federal funding (U.S. Department of Education, 2017), greatly encouraging American women and girls to participate in sport (Acosta & Carpenter, 2014). In China, however, although elite female athletes have achieved great success during international sporting events, sport competitions at the international level, this has often been an orchestrated political instrument for achieving national glory (Xu et al., 2018) rather than an equal opportunity for its citizens to pursue.

In this sense, the substantial differences between China and the United States provide an ideal comparison to examine cultural differences in athlete self-portrayals on social media during the 2016 Rio Olympics. Based on previous literature, five research questions were proposed:

RQ1: How do male and female athletes from China and the United States compare in the *theme of visual images* they post on social media?

RQ2: How do male and female athletes from China and the United States compare in the *level of self-subordination* portrayed in the images they post on social media?

RQ3: How do male and female athletes from China and the United States compare in the *level of reveal in clothing* in the images they post on social media?

RQ4: How do male and female athletes from China and the United States compare in the *level of action* portrayed in the images they post on social media?

RQ5: How do male and female athletes from China and the United States compare in the *face ratio* of the images they post on social media?

Methods

To examine these questions, the current study applied content analysis to photographs posted on the social media accounts of male and female athletes from China and the United States. The photographs examined were posted and retweeted by U.S. and Chinese athletes on social media surrounding the 2016 Rio Olympics. Thus, the unit of analysis was the photograph. To gain a comprehensive view of self-representation during this time period, photograph collection started seven days before the Games began and ended seven days after the Games concluded. The data collected were photographs posted or retweeted on social media between July 29, 2016 and August 28, 2016 by U.S. and Chinese athletes who participated in the 2016 Rio Olympics.

Selection of Media Platforms

For this study, Sina Weibo was selected as the social media platform from which to collect photographs posted or retweeted by Chinese Olympic athletes, while Twitter was the social media platform from which to collect photographs posted or retweeted by U.S. athletes. Sina Weibo is one of the most popular social media in China, hosting 503 million registered users and 222 million monthly active users (Freier, 2015; Ong, 2013). In China, Sina Weibo is viewed as the primary social media platform on which celebrities share information and interact with fans; Twitter is not an available social media within China. As one of the top 10 most visited websites in the United States (Alexa, 2017), Twitter has more than 328 million monthly active users worldwide, generating an average of 500 million tweets per day (Aslam, 2017).

Athletes, Sample Size, and Data Collection

In terms of sample size, 300 photographs were collected for each demographic group: female Chinese athletes, female U.S. athletes, male Chinese athletes, and male U.S. athletes. A total of 1,200 photographs were collected, a sample large enough to produce generalizable findings (Dixon, Singleton, & Straits, 2015).

To select the representative content, complete lists of all Olympic athletes from both the U.S. and China were retrieved from the official website of the International Olympic Committee. The four lists were randomly sorted onto an Excel spreadsheet. Using the sorted lists, the researcher searched for each name on Sina Weibo (for Chinese athletes) or Twitter (for U.S. athletes). If an athlete had a Sina Weibo or Twitter account, photographs posted or retweeted by that athlete during the designated time period were included in the analysis; if no photographs were found, the researcher excluded this athlete and moved on to the next name on the list.

Additionally, to counter significant variation in the frequency and quantity of photographs posted or retweeted by single athletes, no more than 10 photographs were collected from any single social media profile. If an athlete posted or retweeted fewer than ten photographs during the time period, all of them were included. If an athlete posted more than ten, the researcher randomly selected ten from his or her total. The researcher stopped collecting photos for each group once the number of selected photographs reached 300 for that group. In total, 1,200 photographs were collected from the social media profiles of 185 athletes, including 54 American female athletes, 59 American male athletes, 33 Chinese female athletes, and 39 Chinese male athletes.

Coding was done by two doctoral students. After initial training, coders were given 80 randomly chosen photographs from the sample. Based on discussion and resolution of disagreement, an additional 100 randomly chosen photographs were coded. Final reliability was determined using all 180 photographs (15% of the final sample). Individual reliability scores will be reported below.

Using a coding scheme adapted from Goffman (1979) and others (Archer et al., 1983; Emmons & Mocarski, 2014; Gainor, 2017; Geurin-Eagleman & Burch, 2016; Smith & Sanderson, 2015), the researcher coded the collected photographs in two stages. In the first stage, all photographs were coded using two variables: (a) theme of the photograph (i.e., personal life (e.g. hanging out with friends and family) ($N = 280$, 23.3%), athletic life (e.g., training and competitions) ($N = 805$, 67.1%), business life (e.g., promoting products) ($N = 94$, 7.8%), or other ($N = 21$, 1.8%) (Krippendorff's $\alpha = .94$); (b) focus of the photograph (i.e., "self," $N = 807$, 67.3%) or others ($N = 393$, 32.7%) (Krippendorff's $\alpha = .97$).

Only photographs that featured the athlete who posted them ($N = 807$, 67.3%) entered the second stage of coding. These pictures were coded into four major categories. First, the self-subordination category, includes 1) emotion level, i.e., showing emotion ($N = 537$, 69.7%) or not showing emotion ($N = 221$, 28.7%); 2) or no face shown ($N = 12$, 1.6%) (Krippendorff's $\alpha = .97$); 3) smiling, i.e., "yes" ($N = 450$, 83.8%) or "no" ($N = 87$, 16.2%) (Krippendorff's $\alpha = .95$); 4) head position, i.e., "tilted" ($N = 172$, 22.8%) or "not tilted" ($N = 582$, 77.2%) (Krippendorff's $\alpha = .90$); 5) body position, i.e., "upright" ($N = 238$, 31.6%), "bended knee/arched body" ($N = 204$, 27.1%), or "other" ($N = 312$, 41.4%) (Krippendorff's $\alpha = .93$); 6) presence of others, i.e., "yes" ($N = 475$, 58.9%) or "no" ($N = 332$, 41.1%) (Krippendorff's $\alpha = .99$); and 7) point of view, i.e., below eye level ($N = 211$, 26.1%), "above eye level" ($N = 113$, 14.0%), or "other" ($N = 483$, 59.9%) (Krippendorff's $\alpha = .93$).

Second, the next category describes clothing. This category includes: 1) type, i.e., “in uniform” ($N = 511$, 64.8%), “not in uniform” ($N = 264$, 33.5%), or “other” ($N = 13$, 1.6%) (Krippendorff’s $\alpha = .89$); and 2) level of reveal, measured on a 5-item Likert-type scale (1 = *not revealing* and 5 = *highly revealing*), with a mean value of 1.54 ($SD = 1.11$) (Krippendorff’s $\alpha = .95$). Third, another category illustrates level of action, which was assessed on a 5-item Likert-type scale (1 = *completely passive* and 5 = *highly active*) ($M = 2.21$, $SD = 1.17$) (Krippendorff’s $\alpha = .95$). Lastly, the fourth category depicts face ratio, which was gauged on a 5-item Likert-type scale, 1 = *under 20%* and 5 = *80% to 100%*; the mean value for this category is 2.11 ($SD = 1.11$) (Krippendorff’s $\alpha = .91$).

Results

Research Questions 1 and 2 were assessed by a Chi-square analysis. RQ1 addressed differences in photograph theme across gender and nationality. To test the two variables, 16 separate Chi-square tests were conducted. Table 1 reports the frequencies of various themes and notes significant differences.

As indicated in Table 1, three out of 16 Chi-square tests were significant. That is, female Chinese athletes posted significantly fewer photographs about athleticism than male Chinese athletes. Also, compared to female U.S. athletes, female Chinese athletes tended to post more photographs related to personal life and fewer photographs related to athletics.

RQ2 addressed self-subordination differences across gender and nationality. To test the two variables, 60 separate Chi-square tests were conducted. Table 2 reports the frequencies of each indicator and notes significant differences.

As highlighted in Table 2, 12 out of 60 Chi-square tests were significant. In terms of emotion, female Chinese athletes and male U.S. athletes were more likely to show emotion in their posted photographs than male Chinese athletes. Female Chinese athletes and male U.S. athletes were also more likely to be smiling in their posted photographs than male Chinese athletes. In terms of head position,

Table 1
The Theme Differences across Gender and Nationality

	CHN Men	CHN Women	US Men	US Women	Total
Personal	73	96 ^b	59	52 ^b	280
Athletics	205 ^a	167 ^{ac}	214	219 ^c	805
Business	18	29	23	24	94
Others	4	8	4	5	21
Total	300	300	300	300	1200

^a $\chi^2 = 3.88$, $df = 1$, $p < .05$; ^b $\chi^2 = 13.08$, $df = 1$, $p < .001$; ^c $\chi^2 = 7.01$, $df = 1$, $p < .01$.

Table 2
The Self-Subordination Differences across Gender and Nationality

	Chinese Men	Chinese Women	US Men	US Women	Total
Showing emotion	88 ^{ac}	133 ^a	156 ^c	160	537
No emotion	87 ^{bd}	48 ^b	46 ^d	40	221
No face shown	6	2	1	3	12
Total	181	183	203	203	770
Smiling	66 ^{ef}	114 ^e	131 ^f	139	450
Not smiling	22	19	25	22	88
Total	88	133	156	161	538
Tilted head	30 ^j	48 ^j	42	52	172
No tilted head	144	131	160	147	582
Total	174	179	202	199	754
Upright	72	59	64 ^j	43 ^j	238
Posed knee/body arched	46	49	48	61	204
Others	47 ^{hi}	71 ^h	88 ⁱ	96	312
Total	175	179	200	200	754
Presence with others	102 ^k	100 ^l	134 ^k	139 ^l	475
Solo	89	96	76	71	332
Total	191	196	210	210	807
Below eye angle	48	47	65	51	211
High eye angle	24	25	34	30	113
Others	119	124	111	129	483
Total	191	196	210	210	807

^a $\chi^2 = 9.16$, $df = 1$, $p < .005$; ^b $\chi^2 = 11.27$, $df = 1$, $p < .001$; ^c $\chi^2 = 18.95$, $df = 1$, $p < .001$;
^d $\chi^2 = 12.64$, $df = 1$, $p < .001$; ^e $\chi^2 = 12.80$, $df = 1$, $p < .001$; ^f $\chi^2 = 21.45$, $df = 1$, $p < .001$;
^g $\chi^2 = 4.15$, $df = 1$, $p < .05$; ^h $\chi^2 = 4.88$, $df = 1$, $p < .05$; ⁱ $\chi^2 = 12.45$, $df = 1$, $p < .001$;
^j $\chi^2 = 4.12$, $df = 1$, $p < .05$; ^k $\chi^2 = 4.34$, $df = 1$, $p < .05$; ^l $\chi^2 = 6.36$, $df = 1$, $p < .05$.

compared to Chinese men, Chinese women tended to post photographs in which they were tilting their heads. In terms of body position, compared to U.S. women, U.S. men were more likely to post photographs depicting themselves upright. Compared to female U.S. athletes, female Chinese athletes tended to post more photographs showing only themselves than showing themselves with others. Compared to male U.S. athletes, male Chinese athletes posted more photographs showing only themselves than showing themselves with others.

RQ3 addressed differences in the level of revealing clothing across gender and nationality. Considering that athletes cannot determine how their uniforms are designed, this study views uniforms as not revealing by nature. To answer this research question, a two-way Analysis of Variance (ANOVA) was conducted without including pictures portraying athletes in uniform into the analysis. The ANOVA test of 264 cases did not yield any significant differences.

RQ4 addressed differences in the level of action across gender and nationality. A two-way Analysis of Variance (ANOVA) was conducted, with two main effects and one interaction effect between gender and nationality examined. Findings suggested that the main effect of gender was statistically significant ($F(1, 803) = 8.48, p < .05$). Compared to female athletes ($M = 2.09, SD = 1.06$), male athletes ($M = 2.32, SD = 1.26$) tended to post photographs showing themselves in more active poses.

RQ5 addressed differences in face ratio across gender and nationality. A two-way Analysis of Variance (ANOVA) was conducted, with two main effects and one interaction effect between gender and nationality examined. Findings suggested that the main effect of nationality was statistically significant ($F(1, 801) = 11.84, p < .05$). Compared to Chinese athletes ($M = 1.98, SD = 1.01$), U.S. athletes ($M = 2.24, SD = 1.11$) had a significantly higher level of face ratio in their posted photographs.

Discussion

This study identified significant gender differences among Chinese and U.S. athletes in terms of visual self-representation on social media during the 2016 Rio Olympics. Although some hegemonic gender values persisted, U.S. athletes—to a large extent—transcended the traditional gender stereotypes uncovered in mass media representations of male and female athletes. This is especially true for U.S. athletes, when compared to their Chinese counterparts, indicating that culture could exert a significant impact on gendered self-disclosure. This study is one of the first to explore gender differences in the way athletes from different countries engage in self-representation on social media.

In terms of photograph theme, all significant gender differences were related to Chinese women athletes. Compared to male Chinese athletes, female Chinese athletes posted significant fewer photographs pertaining to athletics, a finding that is consistent with hegemonic gender stereotyping (e.g., Billings, Halone, & Denham, 2002). That is, female self-image is often tied to their personal life or beauty. Previous studies have frequently accused the mass media of highlighting non-sport-related characteristics of female athletes (e.g., sexuality, appearance, and family relationships) and giving their identity as an athlete secondary importance (Bruce, 2015). Interestingly, in the current study, although female Chinese athletes claimed agency in presenting themselves on social media, they still posted fewer photographs related to their athleticism than their male counterparts.

Confucianism, an ideology based on the core value of male dominance, has influenced Chinese society for thousands of years (Leung, 2003; Xie, 1994). Confucian ethics legitimize female subservience and obedience to men and primarily define women in terms of their relationships with men (e.g., wife, mother, and sister) (Leung, 2003). Although gender equality is currently one of the

fundamental state policies in the People's Republic of China, the Chinese government has impeded gender equality movements in China because public awareness of gender inequality could potentially trigger domestic disturbance (Fu, 2017).

Many scholars have revealed that hegemonic gender values still have a strong hold on Chinese society and that individual perceptions of masculinity and femininity in China are highly polarized (Zhang, Lin, Nonaka, & Beom, 2005; Xu et al., 2018). In this sense, living and competing in China, female athletes might have internalized patriarchal gender norms and, therefore, have posted fewer photographs pertaining to their athleticism to accommodate social expectations of women's gender role in Chinese society.

Also, compared to female U.S. athletes, female Chinese athletes posted significantly more photographs related to their personal life and significantly fewer photographs pertaining to their athleticism, a contrast that could largely be attributed to cultural differences between the two countries. Before 1972, one of 27 American women played sports, and now the ratio is two in five; that is, American women and girls' participation has grown more than 900% since then (Women's Sports Foundation, 2017).

In China, however, sport (and competition at the international level)—to a large extent—has been organized by the state and applied as a political tool to attain national glory (Xu et al., 2018) rather than a participating opportunity for its citizens. Although Chinese elite female athletes have achieved stunning success during international sporting events, gender equality in sport is not well identified or perceived by Chinese people. In this sense, female U.S. athletes—compared to their Chinese counterparts—might be more used to identifying themselves as athletes and take more pride in their athleticism, echoing Paek et al.'s (2011) findings that mediated gender portrayals could vary by a country's developmental stage in gender equality.

In terms of self-subordination, female Chinese athletes were more likely to show emotion, smile, and tilt their heads than male Chinese athletes; these features are all strong indicators of inferiority and submission in gender display (Goffman, 1979). A similar pattern has frequently been found in mass media portrayals of male and female athletes across multiple cultures (e.g., Bruce, 2016). Based on previous findings, tilting one's head is usually perceived as a sign of lower credibility (Gainor, 2017) and as a more attractive gesture (Krumhuber, Manstead, & Kappas, 2007). Similarly, women are often expected to smile to be perceived as attractive and kind because patriarchal cultures value women based on physical appearance and friendliness (Gainor, 2017; Krumhuber et al., 2007). Thus, these representations might indicate that female Chinese athletes try to align themselves with the social expectation that women should be kind and beautiful.

Another interesting finding of the current study is that, in contrast to a variety of significant gender differences between male and female Chinese athletes, male and female U.S. athletes did not differ in any self-subordination measure except for body position. This finding is particularly important; considering that only small differences emerged between female Chinese and U.S. athletes, the differences between

male Chinese and U.S. athletes were thus relatively more salient. That is, male U.S. athletes were more likely to show emotion, smile, and include others in their photographs, features that have traditionally been identified as “feminine-oriented” (Gainor, 2017). This finding indicates that, compared to male Chinese athletes, male U.S. athletes were more progressive in transcending gender stereotypes, perhaps indicating that patriarchal social values are weakening in the United States. However, the reasons that male athletes from the two countries significantly differed in self-subordination and female athletes from the two countries shared a variety of characteristics invite further exploration.

In contrast to previous findings that gender differences in facial prominence were strong, the current study found that national differences served more as a silent predictor. U.S. athletes were more likely to show a higher facial ratio than their Chinese counterparts. This difference in facial prominence perhaps reflects the influence of cultural background. According to Hofstede (2001), China is deemed as more collectivistic whereas the United States is seen as more individualistic, in terms of their respective culture. Compared to the former, individuals in the latter tend to be more narcissistic and egocentric (Foster, Campbell, & Twenge, 2003; Na, Kosinski, & Stillwell, 2015). In this sense, Chinese athletes, being less egocentric, might have felt more comfortable being photographed from a distance, whereas U.S. athletes tended to take more photographs that more prominently showed their faces.

Limitations and Future Directions

Although the current study has shed light on gender differences in athlete self-representation from a cross-cultural perspective, the findings should be interpreted with caution. Only two social media platforms (i.e., Sina Weibo and Twitter) were examined, and athlete self-representation might vary on other platforms (e.g., Instagram and WeChat). Future studies could include additional media platforms to generate a more comprehensive understanding of athlete self-portrayal. Also, the current study focused on athlete self-disclosure during the 2016 Rio Olympics and did not include non-Olympic time periods. Even though Athletes might have showcased more athleticism during the Olympics, future studies might reveal different behaviors by looking at different time periods.

This study analyzed the public sites of athletes which might carry a purpose related to athletic professionalism and commercial business of being Olympic athletes. The findings uncovered in this study might not be generalizable to the content that athletes posted on their personal and private sites. Moreover, this study collected 600 pictures from over 110 American athletes’ social media sites, whereas only 72 Chinese athletes’ sites were covered to reach the sample of 600 pictures. Why American athletes—overall—posted fewer pictures than their Chinese counterparts invites future exploration. Furthermore, athletes competing in different sports could present themselves in different ways. For instance, swimmers might present themselves in more revealing

ways because swim suits tend to expose more skin. Future studies could further explore the role that specific sports play in athlete self-representation on social media.

This study uncovered salient national differences in self-representation between Chinese and U.S. athletes, in which Chinese male and female athletes—to a large extent—aligned with the hegemonic gender norms whereas minimal gender differences were uncovered between U.S. male and female athletes. That is, instead of being defined as pure variations between men and women, gender differences in self-representation should be examined and understood within social norms and expectations in a specific cultural context. This study contributes to the current literature by introducing and confirming the important role that nationality plays in the gendered self-portrayal on social media.

From a theoretical perspective, this study suggested that cultural background likely exerts a substantial influence. As socialized human beings, athletes more or less internalize social norms that could influence their perceptions and self-disclosure decisions. In addition, athlete self-representation could be influenced by perceptions of fan and follower expectations, considering that social media is an effective tool for managing an online image or brand. Athletes might intentionally post photographs that please a target audience in order to construct a more favorable image. In this sense, although athletes have gained agency and autonomy in representing themselves on social media, this self-representation is a continual negotiation among personal goals, perceived preferences of target audiences, and cultural expectations.

Disclosure statement

No potential conflict of interest was reported by the authors.

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"A Finer Type of Radio": The Women's National Radio Committee and Its Battles for Better Radio Programming

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“A Finer Type of Radio”: The Women’s National Radio Committee and Its Battles for Better Radio Programming

Jennifer M. Proffitt

This manuscript examines the efficacy of the Women’s National Radio Committee (WNRC) and its influence on the radio industry in the mid-1930s. For the WNRC, giving awards to model programming was more effective to encourage change than merely complaining. As such, one of its most significant contributions was its annual radio awards ceremonies. The WNRC also attempted to distance itself from the caricatures of clubwomen and reformers to make the group more acceptable to radiomen. Once the WNRC asserted its influence in a way that industry executives could not control, they attempted—with some success—to contain the group’s power.

By the early to mid-1930s, commercial broadcasting as we know it was well-established, dominated by advertisers and corporate radio network owners broadcasting news and entertainment nationwide. Broadcast reformists—including educators, labor organizations, and religious groups—wanted a system that was structured to serve the public’s interest, limited or eliminated advertising, and belonged in the hands of many. Despite these struggles, the monopolistic commercial network system—headquartered in New York City and supported by advertisers, politicians, and regulators—thrived (Barnouw, 1968; McChesney, 1993; Newman, 2014). Just two companies—National Broadcasting System (NBC)¹ and Columbia Broadcasting System (CBS, then known as Columbia)—dominated radio programming.² Concurrently, the 1929 stock market crash and its aftermath left many unemployed and in poverty, yet millions still tuned in every night. Because of radio’s pervasiveness, many citizen, education, and women’s groups expressed concern about radio’s commercialization and the programming aired, especially children’s programs (Newman, 2004; “New”, 1934). It is within this context that the New York City-based Women’s National Radio Committee (WNRC) formed in 1934.

The WNRC organized to improve radio programming standards and to promote “a finer type of radio program” (Campbell, 1934, n.p.). This group became one of

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the first women's clubs in radio circles legitimized by the press, the FCC, and the radio industry for its strategies to improve radio programming within the entrenched commercial system. The WNRC achieved this distinction in part because it was the first group to extend awards for radio programming, awards that were voted best by its membership and coveted by radiomen; in fact, the press compared the awards to the Pulitzer prize ("G. M. C.", 1935) and the Oscars ("Radio's Oscar", 1938). The group was also influential due to its proximity to the epicenter of radio and to the number of women involved: it was the umbrella organization for approximately 21–24 of the largest women's organizations, with membership estimated to be 10 to 17 million women—women who advertisers coveted (Peiss, 1998).

The radio industry (network and station owners) and its supporters (advertisers and regulators) characterized clubwomen's criticism as non-constructive, propagated by a noisy minority, and argued that children and adults enjoyed network programming, evidenced by the increase in sales of the programming sponsors' products. To counter this portrayal of women's groups, another strategy would be necessary. The WNRC found that collaboration between women's groups and the industry appeared to be more palatable to radiomen than criticism.

The history of the role and influence of women in broadcasting is an essential line of inquiry. While there is some historical research regarding influential women in radio and the significance of radio and radio programs for and by women in the United States (e.g., Brinson, 2007; Carter, 2004; Ganzert, 2003; Grubbs, 2004; Halper, 2015; Hilmes, 2005; Hosley, 1982; Smith, 2007), additional research is warranted. Further research is also necessary regarding women's clubs such as the WNRC in broadcast history, for such groups had an important influence on regulatory agencies, the industry, and programming (see Newman, 2004; Proffitt, 2010).

This article examines the WNRC's efficacy and influence as a citizens' group upon the radio industry at a time when various reformist groups attempted to counter the commercialization and ownership concentration that affected programming (e.g., Hilmes, 1997; McChesney, 1993; Newman, 2004). The purpose is to trace the group's early influence using documents from the women themselves, radio critics, trade journals, the popular press, and the radio industry. The WNRC did not criticize the structure of the industry; in fact, its leaders defended the industry against FCC attempts at regulation. Rather, the women publicly disapproved of what they saw as appalling children's programming, offensive advertising, and a lack of programs with cultural value. They believed that rewarding model programs was more effective than merely criticizing problematic radio shows if the aim was to encourage better programming. While the WNRC would remain influential until it disbanded in 1946, this article focuses on its early years; by 1937, two years after its first awards ceremony, word of internal battles and industry efforts to undermine the group would open the WNRC to criticism that raised suspicion regarding its purpose and ethics. The article begins with a discussion of women's clubs to provide insight into the WNRC's mission.

Roots in the Woman's³ Club Movement

Contrary to the caricatures of clubwomen immortalized in Helen Hokinson's cartoons in *The New Yorker* (1925–1949), the U.S. woman's club movement's primary intent post-Civil War was: education (Blair, 1980; Croly, 1898; Martin, 1987). Jane Cunningham Croly, a women's-page journalist with the nom de plume "Jennie June" (Martin, 1987) and the "single most important figure in the woman's club movement" (Blair, 1980, p. 15), wrote an extensive book chronicling the history of the movement up to 1898. Croly (1898) explained:

The woman's club was not an echo; it was not the mere banding together for a social and economic purpose, like the clubs of men. It became at once, without deliberate intention or concerted action, a light-giving and seed-sowing centre of purely altruistic and democratic activity. (p. 13)

Woman's clubs were generally democratic in spirit and structure, though also exclusive. Sorosis, organized by Croly in 1868 in New York City, was "a club composed of women only, that should manage its own affairs, represent as far as possible the active interests of women, and create a bond of fellowship between them" (p. 15). The membership was largely affluent, white, middle-aged, Anglo-Saxon, Protestant, and married with grown children (Martin, 1987). Sorosis and the New England Woman's Club, initiated at the same time, served as models for women's clubs in the latter half of the nineteenth century.

According to Blair (1980), "An understanding of clubs demands a familiarity with the ideology of the 'lady': the belief that every woman was a moral and domestic creature who embodied the desirable traits of loving maternity, intuition, and sensitivity" (p. 1). In the eighteenth and early nineteenth centuries, the "ideal lady" was upper-class, "leisured and ornamental" (p. 1). With industrialization, the "ideal lady" perception broadened to include middle-class women with newfound "leisure" time as their husbands made enough money that they did not need to work outside the home. This time allowed women the opportunity to form clubs, for they were isolated from the public and commercial realms that men dominated (Martin, 1987).

Sorosis' twenty-first anniversary led to the formation of the General Federation of Women's Clubs (GFWC) in 1889, which aggregated women's groups across the United States and decades later would be one of the largest clubs associated with the WNRC. Until March 1889, "women's clubs were a local institution" (Croly, 1898, p. 85), but with the GFWC's implementation, the club movement extended nationally. Blair (1980) argued that the formation of the GFWC "formalized the right of women to turn their attention to civic work" (p. 119). She continued:

The new clubwoman of the 1890s was far more ready to tackle public problems than her mother and grandmother had been, due in large part to the success of the Woman Movement in creating jobs and schools for her. Culture

study and growth of confidence became less relevant as clubwomen discovered, in bringing their beloved libraries and art programs to the public, that collectively they could bear considerable influence upon any issue they deemed important. (p. 119)

By the turn of the century, women's clubs opened up space for some women in the male-dominated public sphere to affect change. This space became more prominent and publicized in the years after. As a 1936 GFWC article noted:

Today, club activities are news. Club women no longer hold their meetings behind closed doors and spurn publicity, the reason being that clubs today deal with matters of public interest, with questions and problems which affect the welfare of the people of the community. (Highsmith & Wells, 1936, n.p.)

It is within this tradition that the WNRC was formed.

The WNRC

No archive exists for the WNRC, so it was necessary to reconstruct its story from materials found in the archives of NBC,⁴ the GFWC, the Woman's Christian Temperance Union (WCTU), the Library of Congress, and other collections and published works. The WNRC's original executive committee included founder and advisory chairwoman Yolanda Mero-Irion, an accomplished Hungarian pianist self-described in a letter to an NBC executive as "Your pest from Budapest" (Mero-Irion, 1938, p. 1); Mrs. Harold Vincent Milligan, first chairwoman of the group and longtime clubwoman who was also involved in the GFWC; and Luella Laudin, executive secretary of the group described by *Newsweek* as a "large, hearty mother of two [who] finds broadcasters harder to bring up than children" ("Woman", 1936, p. 45). Formed in 1934, the WNRC began when Mero-Irion contacted Milligan to discuss her plans to organize women around the issue of better radio programming. Milligan (1935a) noted, "letters were sent to key women all of the country to find out how many other women felt as we did" (p. 10). She continued:

To our amazement, the response was immediate and expressed in no uncertain terms the fact that women were disgusted with the cheap vaudeville which radio paraded sixteen hours a day, and demanded that a greater number of cultural programs be presented. (p. 10)

The member organizations affiliated with the WNRC "include[d] educational, patriotic, civic, religious, social, philanthropic, business, professional and cultural groups and aim[ed] to serve as a link between the radio industry and organized womanhood" ("Programming Idea", 1935, p. 44). Executive

Secretary Laudin often reminded radio executives about the millions of women associated with the WNRC, including the members of such prominent organizations as the GFWC, the WCTU, and the American Legion Auxiliary, some of whom already expressed concerns about radio programming. These groups rallied around the need for higher standards for radio broadcasting. For example, the WCTU joined the WNRC after receiving an "S.O.S." that noted, "It is squarely up to the women of America to unite their forces" to "attain a higher level of radio entertainment, and establish a standard of American culture compatible with the ideals of all thinking women" ("New", 1934, p. 613). Another objective of the organization was to secure the appointment of at least one woman to the FCC, though this did not happen until Frieda Hennock's 1948 appointment (Campbell, 1934, n.p.; "New", 1934).

Milligan noted that the WNRC organized "to make more articulate the views of American womanhood regarding radio" ("Program Study", 1935, p. 9). She "emphasized" that the group was "not in any sense a 'reform' movement, analogous to the motion picture crusade or to the factional educational lobby for radio facilities" (p. 9), a lobby fighting for more space on the radio spectrum. The group supported the commercial broadcasting system; it simply wanted improvement. Milligan's assertion that the WNRC was not a "reform" movement accomplished two tasks: make the group more acceptable to the industry and distance themselves from the negativity toward and caricatures of reformers. Milligan explained that the group was not the humorists' stereotypical conceptions of clubwomen: "'grim-faced, angular women, striding through life as a Carrie Nation,' or the 'plump, none-too-clever woman whose great moment comes when she gives a tea for a visiting poet'" ("Showmen", 1935, p. 11). She insisted that the WNRC was "not seeking that radio should become 'highbrow;'" rather, it wanted "'a greater number of programs of lasting value'" (p. 11).⁵ At the same time, these were mostly women of a higher socio-economic status, as clubwomen traditionally were, with the time and education to monitor radio, write to the networks, participate in listen-in campaigns, and meet at luncheons at a time when so many others lived in poverty.

The industry and the FCC acknowledged the WNRC's influence, as FCC Chairman Anning Prall and representatives of NBC, Columbia, and the National Association of Broadcasters (NAB) met with Mero-Irion, Laudin, and Milligan in March 1935 to discuss preliminary plans for cooperation between WNRC and the industry at an "informal conference" initiated by Prall ("Program Study", 1935, p. 9). In May 1935, Columbia announced that it would create an advisory board "to raise the standard of children's radio programs," and Chairwoman Milligan would be a board member ("Twisting", 1935, p. 4). The addition of this board was the result of a WNRC proposal presented at the conference.

NBC executives believed that the WNRC had been "constructive in their work" (Aylesworth, 1935, p. 1) and were "strongly impressed by the potential power of this group and [thought] that it might be directed into useful and constructive channels if tactfully handled during its formative stage" (LaPrade, 1935, p. 1). In an attempt to

manage the group, NBC suggested at the conference that the women conduct a study of network fan-mail, busywork that could take a year or two to do (Aylesworth, 1935; “Program Study”, 1935).⁶ The WNRC’s participation at this “informal conference” and others demonstrated initial acceptance—or at the least tolerance—of the role and potential impact of the organization and the industry’s early attempts to contain this influence.

The WNRC’s Awards and Advice

The first WNRC ceremony was held April 10, 1935, as a luncheon at the Hotel St. Regis, New York. Judges included “an author, an actress, a club woman, a society woman, a patron of music, a composer, and an editor”⁷; they selected four programs from 40 recommendations provided by a nationwide “listen-in” campaign by members of the clubs the WNRC represented (“Choose”, 1935, p. 10). The judging criteria included the programs’ “entertainment and instructive value, their contribution to the cultural tastes of the radio audience and the dignified manner in which the advertising material was handled” (“Radio Programs”, 1935, p. 25). Four programs received awards, and fourteen more received honorable mention (see Table 1). FCC Chairman Prall presented winners with hand-illuminated parchment scrolls.

Table 1

1935 WNRC Award Winners

- Sunday night symphony concert series presented by General Motors
- The March of Time*
- Columbia Concert Music Hall broadcasts
- You and Your Government*
- Honorable Mention**
- Monday night concerts with Lawrence Tibbett
- Immortal Dramas*
- Erno Rapee’s Music Hall
- Pacific Coast Symphony concerts
- Columbia’s String Quartet
- WOR’s Little Symphony
- One Man’s Family*
- NBC Dramatic Guild
- Sunday afternoon Radio Theatre on WEA
- Chicago Round Table series
- Wallenstein’s Sinfonietta on WOR
- WEVD’s University of the Air
- Dr. Montague’s health talks on WOR
- WEVD travel talks by Hendrik de Leeuw

(Source: “Radio Programs”, 1935)

Importantly, the awards were not for the producers, writers, or artists but rather for the commercial sponsors, the networks, or individual stations, for the goal was to encourage the production of better programs rather than recognizing individual talent ("Awards Planned", 1936). Prall was quoted as saying, "this meeting may go down in radio history as one of the outstanding progressive movements in radio," and noted that "broadcasting must not be turned into a grotesque sideshow" ("Citations", 1935, p. 13). He explained that while the law does not allow the FCC "direct control of programs or censorship," the Commission "can maintain a general surveillance over radio stations in the public interest" and "has the power of refusing to renew the license to broadcast" of any "consistent violators" (p. 13).

The award choices had their critics. *New York Times* radio editor Orrin Dunlap Jr. (1935a) explained that the industry did not understand how programs could win popularity polls, but not win a scroll, and questioned whether four awards could cover the vast amount of radio entertainment. Nonetheless, the industry took the awards seriously. Dunlap (1935a) stated, "[T]he showmen are taking stock of their shows. They are looking for constructive criticism in an effort to eliminate the flaws in their handiwork so that they may qualify for one of the 1936 scrolls" (p. 11). Over the years, Dunlap would complain about who won awards and why, arguing that the WNRC ignored the most popular shows, such as *Major Bowe's Amateur Hour*. However, the women found such shows problematic for a cultured society.

In a perhaps more insidious example of criticism, a man named Roy Albertson, Esq. (1935c) from Buffalo, New York, wrote a scathing letter to the editor of the *New York Times*. Titled "Too Many 'Crocodile' Tears," his letter called groups like the WNRC "busybodies" and "self-appointed vigilantes" (p. 11). He wrote:

These super-patriots would have you believe that they have a direct command from heaven to protect little Willie from the daring exploits of a hero who develops all his courage and stamina from eating a bowlful [sic] of cereal each morning ... Radio must be kept free of the meddling and censorship of noisy minorities. (p. 11)

Presumably unbeknownst to the WNRC and the *Times*, Albertson was encouraged by NBC executives to send this letter.

Several weeks before his letter was published, Albertson sent a letter to NBC Vice President Richard Patterson, who was a speaker at the WNRC's luncheon, stating that he wanted to "express [his] personal appreciation of the note of sanity which you injected into the Woman's [sic] National Radio Committee luncheon broadcast" (Albertson, 1935a, p. 1). Patterson (1935a) wrote back, telling Albertson "it is indeed encouraging to find such appreciation of our efforts in behalf of the listening public, and such understanding of our problems" (p. 1). Patterson (1935b) forwarded Albertson's letter to David Sarnoff,⁸ president of RCA, parent company of NBC, stating, "This man talks my language and I hope you will find time to read it" (p. 1). He also forwarded it to John Royal, VP of Programs, who replied that the

letter was “wonderful” and that “It would be nice if it could be sent to the Editor of the New York Sun” (Royal, 1935a, p. 1). Patterson responded: “Because of the fact that I am involved, I wouldn’t care to do it myself, but if you sincerely believe in the substance of this letter, I should be glad to see it published somewhere” (Patterson, 1935c, p. 1). In response, Royal (1935b) encouraged Albertson to send his original letter to the editors of the *Sun* as well as the *New York Times* and the *New York Herald-Tribune*. Albertson (1935b) obliged, telling Royal that groups such as the WNRC that “have more or less of a nuisance value should be kept in a strait-jacket, the place where all freaks and nuts belong” (p. 2). While NBC coveted the WNRC awards and at times, as NBC documents suggest, manipulated its way into winning some of those awards—including three of the first four awards—it also attempted to defuse or neutralize criticism and undermine the organization.

Responding to critics, for the second annual awards ceremony, held in April 1936, the WNRC modified the award categories and selection; it also added a fifth award. This time, awards were selected via popular vote—5000 ballots were sent to members of the organization (“Awards Planned”, 1936). Milligan stated that the awards were given “to encourage broadcasters and advertisers to exercise more originality as well as to follow higher standards of taste in the creation of their programs” (p. 41). Columbia and NBC broadcasted the ceremony, and network executives and FCC Chairman Prall presented the winners with scrolls. At the luncheon, Prall “commend[ed] the organization for ‘its devotion to a cause in which the listening public and the broadcasting industry are both vitally interested—the improvement of radio programs’” (“4 Radio Programs”, 1936, p. 14).

Winners included the Friday night Cities Service concerts with the Revelers Quartet and Jessica Dragonette for “best program of light music;” *Rudy Vallee’s Varieties* for best non-musical program in the field of comedy, drama or variety; *America’s Town Meeting of the Air* for best educational program; and *Wilderness Road*, for best children’s program. Interestingly, though a fifth award was added, the award for best serious music was not presented, as the group thought no program was worthy of this award. Again, the *New York Times’* Dunlap (1936) questioned the selections, noting that more subdivisions were necessary to cover the diversity of radio fare. He did note, however, the impact of the group and its awards on the industry: “It is generally agreed in radio circles that the [WNRC] has taken on a gigantic task, and by doing so has attracted considerable attention in its efforts to spur the broadcasters to lift the cultural and entertainment standards of radio” (p. 10). The WNRC took the criticism under advisement, adding a sixth award in 1937 and presenting one primary award and 35 citations of merit in 1938.

In the mid-1930s, the WNRC was concerned with children’s programming, which the women thought was awful due in part to rampant commercialization (see Newman, 2004 for a broader discussion of advertising and consumer activism at the time). As noted in the group’s fourth newsletter, titled *Radio Review*: “Children’s programs continue to be the weakest spots in the whole broadcasting system, with advertisers clinging tenaciously to the theory that only feverish and overexciting

material will sell cereal and food drinks" (Laudin, 1935, p. 2). The WNRC issued "its list of approved children's programs" in reply to "numerous requests" (p. 7). The group regretted that "the list [was] not longer" but would "be pleased to add to it any new programs worthy of joining the small but select circle of those [they could] conscientiously recommend" (p. 7). Only 11 programs made the list, four of which were educational features. Examples included *Alfred Terhune's Dog Stories* (Mutual), *Captain Healy's Stamp Club* (NBC), and *Cavalcade of America* (CBS). The WNRC rejected children's programs for multiple reasons:

Materials too exciting; too much action contained in a brief period; speech of characters too rapid; in programs which purported to be everyday experiences of boys and girls, abnormal situations presented quite outside the range of children's activities; deliberate coinage of slang phrases which are foreign to vocabulary of children; language either too mature or deliberately graded down so that it insults the intelligence of the average child; too suspenseful climax, leaving the child in an over-excited state at close of the broadcast; unpleasant raucous voices. ("Behind the Scenes", 1935, p. 15)

By 1936, the number of approved programs increased to just 13 ("Thirteen", 1936). As is often the case, children's programs that women's groups disapproved of tended to be popular with children and sold products. For example, programs such as *Dick Tracy*, *Buck Rogers*, and other shows with "blood-and-thunder" continued to be produced, despite the criticism.

To encourage better children's programs, the WNRC produced lists for parents and presented awards for the best children's programs at its awards ceremonies. And at the 1938 awards ceremony, *Broadcasting* reported that WNRC founder Mero-Irion believed "children's programs [were] improving" (Robertson, 1938, p. 32). She argued that the blame for inferior programming rested not with the networks or advertisers, but with the public: "If the public would be articulate and write, telephone, telegraph when they hear a good program instead of swamping us with complaints about the bad ones, the whole situation would be cleared up very quickly" (p. 32). As a civic-minded women's club, the WNRC attempted to encourage its members to take matters into their own hands: the more active women became, the more likely the radiomen would listen. However, by not criticizing the commercial system, the group only scratched the surface of the symptoms of commercial broadcasting by focusing on consumer choice.

Accomplishments and Admonishments

In January 1936, the WNRC newsletter noted the accomplishments of 1935, stating:

We have seen many of our suggestions for the improvement of programs become policy with radio companies, and while our exact position so far as the industry is concerned changes from day to day, we believe we have convinced the gentlemen who make the wheels go around that we are sincere, that we have no axes to grind, and that we desire above all to be constructive. (Laudin, 1936, p. 1)

Indeed, in just one year the WNRC had made a mark in radio circles. In the wake of an announcement by Columbia that the network would curb “blood and thunder” from children’s programming and eliminate offensive programs and advertising, Dunlap (1935b) credited the efforts of the WNRC, listeners, and other women’s groups “crusading” for the change (p. 13). Relatedly, A. Truman Ward, president of the NAB, presented the WNRC’s suggestions at the NAB’s annual convention and “assured the committee of the cooperation of the radio industry” (“Women’s Nat’l Radio”, 1935, p. 10). Campbell (1935) also noted that “Broadcasters and sponsors [were] willing to co-operate with the committee” (p. 2). This cooperation was likely due not only to the WNRC’s large membership, but also the industry’s aversion to government regulation; self-regulation remained imperative, so responding to the millions of women the group represented was also self-serving.

The WNRC recognized the praise and criticism that the group had received. As WNRC Executive Secretary Laudin (1936) stated in the *Radio Review*:

When we have praised a progressive step or a good program, we have basked in the warmth of the enthusiasm about our work which our encomiums aroused. When we have denounced objectionable features, the frigidity which at once became apparent in the attitude of radio row made us long for the balmy breezes of the Antarctic so that we might thaw out. Alternatively we have been God’s gift to radio or its ‘number one headache’, depending upon our reviews of programs. (p. 1)

It was founder Mero-Irion, however, who appeared to be NBC’s “number one headache.”

NBC internal memos between male executives revealed that they viewed her as difficult and even “vicious.” In a letter from WNRC Chairwoman Milligan to NBC VP of Programs John Royal, Milligan (1935b) told him that she was “concerned over the growing legend about Mrs. Irion” (p. 1). One reason why Milligan was concerned with the negative view of Mero-Irion was due to her own vested interest in the WNRC, as the organization was “called in [her] name” and a majority of the women involved were “personal friends ... in the women’s organizational world” who respected her and her judgment (p. 1). Milligan also stated that she knew a female friend whose “earning capacity [had] been seriously affected and her morale crushed by a no more serious rumor than that she [was] ‘difficult’ to work

with. Men in business do not like emotional, highly-strung women" (p. 1). She noted that she had heard people refer to Mero-Irion as "'a dangerous woman'; 'destructive'; 'uncontrollable temper'; 'ego-maniac'" (p. 2).

As Halper (2015) discussed, while women in the 1930s were taking on "nontraditional" employment such as in broadcasting, with notable exceptions, women remained largely behind the scenes. Additionally, misogynistic views of women in the workplace as "emotional" and "illogical" continued to be perpetuated. As such, outspoken women were viewed with contempt and seen as "dangerous" to discredit them and divert attention from their criticism. Mero-Irion's "legend" would grow over the next decade. Her strong personality irritated NBC executives, who thought Mero-Irion held a grudge against them for not producing programming she had suggested in 1935 (Cuthbert, 1937b). Still, radio industry executives, politicians, FCC Commissioners, and dignitaries attended the awards luncheons and at times incorporated Mero-Irion's suggestions for programming and music, perhaps due to the number of women the WNRC represented. Not responding would have public relations implications.

Internal and External Battles

Concurrently, just two years after its inception, the WNRC faced challenges regarding its financing and mission, questions that would threaten the organization's legitimacy. By October 1936, Executive Secretary Laudin's name was no longer included in the WNRC's newsletter, and Milligan was no longer listed as chairwoman, presumably due to reports that founder Mero-Irion sold or tried to sell listener surveys collected by the WNRC to advertisers, which contradicted the original mission of the organization. NBC discovered that the WNRC was, presumably, "no longer a strictly non-commercial, altruistic organization" (Koons, 1937b, p. 1). Koons, music supervisor for NBC, explained that RCA President Sarnoff had received a "communication ... offering to give RCA a survey of listener reaction on a commercial basis" (p. 1).⁹ He reported that he knew "definitely that such a survey has been sold to Shell Oil Company; how many more clients this organization may have is unknown to me at the present time" (p. 1). He continued, " ... it strikes me that this commercial aspect of the WNRC completely changes the self-claimed altruistic activities of this organization" (p. 1). He also noted that "this change of policy caused great turmoil" (p. 1): Milligan resigned and several national organizations withdrew from the organization. Milligan insisted to NBC that she was no longer part of the WNRC and that the organization continued to use her name without her authority (Koons, 1937c).

Several days later, the entertainment trade magazine *Variety* published an article critical of the group's turn:

"Eyebrows are raised around the broadcast trade as the Women's National Radio Committee, organized to 'reform' radio has now started to 'survey' radio at commercial rates. Question asked is how the Committee will be able to avoid embarrassment with advertising clients and clubwomen members all in one family." ("Radio Reform," 1937, p. 30)

A letter to Sarnoff from NBC VP of Programs Royal (1937) noted, without providing additional context, that the WNRC "has been in the throes of some internal dissension during the past year or two, and has been organized for a possible commercial setup to get surveys for clients. They make awards to outstanding programs each year, and these have always been open to question" (p. 1). He recommended that Sarnoff avoid the upcoming award ceremony and that Sarnoff could "accept an invitation next year if the organization develops legitimately" (p. 1). Sarnoff did not attend this ceremony but did attend several future luncheons. NBC was able to use this internal dissension to dismiss and rebuke the WNRC and the awards, particularly if NBC did not win.

On April 7, 1937, just days after the third annual award ceremony, *Variety* published another disparaging article stating that the award ceremony did not have the attendance it had three years before, "[w]ithout splashy newspaper publicity" and "without much Sunday behavior from the agency boys who seem to have grown a mite disrespectful since the first August thunderclouds threatened to wash up a flock of radio programs" ("Reform", 1937, p. 32). The article continued:

What's come over the WNRC is largely a matter for students of Americana. Back in the early days when the ladies joined hands in their crusading cause, the networks shuddered every time somebody yelped that the blood-and-thunder was driving little Johnnie into insomnia. Highfaluting music was a magic word. And back of the whole cause ... was Luella S. Laudin, ex-chain employee, who whipped the membership into a fervor and threatened Washington with sticking a femme onto the F.C.C. if a cleanup wasn't in sight pretty quick. Under the Laudin regime, the ladies said they had 20,000,000 members through various affiliates, access to coin from public-minded people, and no intentions of getting into any commercial ventures. (p. 32)

However, Laudin "suddenly disappeared" around the time of the second awards ceremony, and rumors abounded regarding "a bust-up pending in the home camp" (p. 32). *Variety* suggested that "the split-up was partially an economy measure, and partially the result of an internal battle" about the commercial surveys (p. 32). It reported that Laudin "vehemently opposed" the commercial turn, arguing "that you can't fight the enemy at one time and at another get on his payroll" (p. 32). WNRC founder Mero-Irion, on the other hand, "favored making commercial surveys ... as a means of keeping the coffers flush" (p. 32). Mero-Irion won that battle, *Variety* stated, and Laudin and Milligan left the organization, taking other women with them.

NBC's Koons (1937a), citing "confidential sources," reported that one reason why the WNRC needed extra money was the group had been primarily funded by Mero-Irion personally, which she was no longer able to do. He said the organization tried to obtain funding from sources such as the Carnegie Foundation, but to no avail. However, Lenox Lohr, then president of NBC, noted that he had a conversation with a Mrs. McNerney, who sat next to him at an NBC meeting and denied that the WNRC turned commercial. She assured him that the organization had not received money from Shell Oil (Lohr, 1937). No matter whether the organization actually turned from altruistic to commercial, each year after, NBC executives threatened to not attend the awards ceremony and to ask other networks not to attend, either. However, NBC executives did attend future luncheons, as they likely were afraid of the potential fallout or missed opportunities if they did not, particularly as dignitaries, celebrities, and regulators continued to make appearances, and, if the *Variety* article was accurate, they feared a woman being appointed to the FCC who would require broadcasters to provide better programs. While executives claimed they were no longer taking the WNRC seriously, they continued to count and publicize the number of awards they won. And though NBC executives expected the death of the organization within the next few years, particularly when they found out that the GFWC pulled out of the WNRC, Mero-Irion's Committee survived into the 1940s.

Conclusion

By the late 1930s, the WNRC's focus shifted to the war, and the focus of the awards shifted to programs that best served democracy (Proffitt, 2010). The group disbanded in December, 1946, stating that too many other groups were giving awards and that the group achieved what it needed to achieve in a time when radio was in its infancy (Lohman, 1946). But in the mid-1930s, the WNRC was an influential women's group, one that the industry, the press, and the FCC took into consideration, inviting the group to meetings and attending the awards ceremonies, and one that the industry attempted to undermine through public and private criticism.

In general, the industry attempted to appease WNRC leaders by integrating their suggestions and remained, for the most part, on friendly terms. Margaret Cuthbert (1937a), NBC's director for women's programs, noted the need for continued goodwill with clubwomen, no matter how exasperating WNRC founder Mero-Irion could be, as she had the ear of many important people. This would prove to be in the industry's best interest: Even though some industry executives considered Mero-Irion an enemy, she supported the radio industry system in its structural form, focusing on how to improve programming and advertising instead. She would later blast the FCC in the early 1940s for regulations that would challenge the networks, calling FCC actions that would break up the radio monopoly "undemocratic, un-

American and an infringement of liberty at a time of crisis when the preservation of free speech, press and radio are essential to the continuance of democratic institutions'" ("Next", 1941, p. 22). At the same time, once the WNRC asserted its influence in a way that NBC could not control, such as in the case of asking the group to do busywork, executives worked to undermine its power, as evidenced by NBC internal memos.

While the WNRC did criticize children's programming and offensive advertising, it also used the awards ceremonies to attempt to raise the bar, encouraging the industry to provide better programming. The group focused on consumer activism—such as asking women to vote for the annual awards—rather than tackling the structures that allowed for such problematic programming and commercialization. As noted, the industry did implement some of the Committee's suggestions, and the networks competed for and publicized the awards. Though it could be argued that the suggestions implemented were public relations tactics meant to curb criticism of the industry from listeners and regulators, such as FCC Chairman Prall—who praised the WNRC for its efforts—it is evident that the WNRC was significant in radio circles. The WNRC also demonstrated that clubwomen were not caricatures; rather, they were determined, civic-minded in their focus, and prepared to work to improve the commercial radio industry.

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Notes

1. NBC had two networks, Red and Blue.
2. Unlike the corporate networks, a third broadcaster, Mutual Broadcasting System, established in 1934, was a cooperative venture between several radio stations.
3. This heading is based on Croly's (1898) book, *The History of the Woman's Club Movement in America*. Woman's clubs and women's clubs are used interchangeably.
4. At this time, CBS does not have an archive accessible to the public.
5. However, the group did promote and reward highbrow music culture. See Rubin's (1992) discussion of "middlebrow culture," the space between "high art" and consumer culture.
6. It is not clear whether they conducted this study. They did, however, create surveys and solicit letters from women regarding their thoughts about radio programming.
7. This was the only year that two of the judges were men.
8. David Sarnoff is considered one of the pioneers of radio and television broadcasting. For a brief discussion regarding his considerable influence, see <https://www.nytimes.com/1971/12/13/archives/david-sarnoff-of-rca-is-dead-visionary-broadcast-pioneer-david.html>.
9. It is not clear from Koons' memo who the communication was from, but it was likely research organization Wadsworth & Wood Sales, Inc., who reportedly had a deal with the WNRC allowing the company to poll the group's members ("W.N.R.C.", 1937).

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