

2013

Exploring the impact of ethnic identity through other-generated cues on perceptions of spokesperson credibility

Patric R Spence, *University of Kentucky*

Kenneth Lachlan, *University of Connecticut*

Stephen A. Spates, *University of Tennessee - Knoxville*

Ashleigh K. Shelton, *University of Massachusetts - Boston*

Xialing Lin, *University of Kentucky*, et al.

Contents lists available at [SciVerse ScienceDirect](#)

Computers in Human Behavior

journal homepage: www.elsevier.com/locate/comphumbeh

Exploring the impact of ethnic identity through other-generated cues on perceptions of spokesperson credibility

Patric R. Spence^{a,*}, Kenneth A. Lachlan^b, Stephen A. Spates^c, Ashleigh K. Shelton^b, Xialing Lin^a, Christina J. Gentile^d^a Division of Instructional Communication, Department of Communication, University of Kentucky, Lexington, KY, United States^b Communication Department, University of Massachusetts Boston, MA, United States^c School of Communication Studies, University of Tennessee, Knoxville, TN, United States^d School of Communication, Western Michigan University, Kalamazoo, MI, United States

ARTICLE INFO

Article history:

Available online xxxxx

Keywords:

Social media

Race

Ethnic identity

Source credibility

ABSTRACT

Although previous studies indicate that perceived similarity can influence perceptions of source credibility, less is known about the impact of ethnic identity on these perceptions in social media environments. A quasi-experiment was designed to manipulate the strength of ethnic identity of an African American spokesperson promoting a health news story. The results indicate a substantive condition by participant ethnicity interaction, in which African Americans assign greater credibility to high ethnic identity spokespersons, while Caucasian respondents found low ethnic identity spokespersons more credible. The results are discussed in terms of the understanding of credibility perceptions across diverse audiences, and the implications for health communication professionals working with historically underrepresented populations.

© 2012 Elsevier Ltd. All rights reserved.

1. Introduction

As noted by Appiah (2003), there is debate across the literature on whether African American and Caucasian audiences will be equally compelled and informed by media messages that are tailored to specific ethnic groups. In a study by Spence, Lachlan, Westerman, and Spates (2013) examining the role of ethnicity and credibility on social media, health messages presented by Caucasian or African American avatars were evaluated in terms of their impact on Caucasian or African American audiences. The results indicated that African American avatars on social media pages were, for the most part, found to be highly credible by participants when promoting a health news story germane to the African American community. African American participants consistently rated the avatar as more competent, caring, and trustworthy, regardless of avatar ethnicity. More noteworthy, however, was the finding that the specific combination of African American audience members viewing Caucasian avatars led to the highest level of perceived credibility among the four groups. The Spence et al. (2013) study raised numerous questions and areas for future research. Because previous research has shown that individuals tend to seek out information from similar others, it is notable that when all things were held constant, African Americans found similar others less

credible. In response to that finding, the current study seeks to replicate and extend the Spence et al. (2013) study, specifically examining the impact of representations of avatar ethnic identity on credibility perceptions.

1.1. Source credibility in social media

Mass media provide several vehicles that can be used to educate audiences about different issues, and health related issues have received a substantial increase in attention in recent years. With the average American devoting more of their internet usage (22.5%) to social media (Nielsen, 2011), such outlets have undoubtedly become one of the most prominent media-related phenomena today. Social media has become a popular resource for health information (Cline & Haynes, 2001; Fox & Jones, 2009; Kivits, 2009), and the high rate of diffusion of the internet has placed an unprecedented amount of health information within reach of the general public (Neuhauser & Kreps, 2003). Although studies have looked at the characteristics of individuals that use new media resources to obtain health information, (Fox & Fallows, 2003; Fox & Rainie, 2000), little is known about how individuals make credibility judgments regarding the promotion of online health information, and less is known about the intersection of race, social media, and credibility judgments (Spence et al., 2013).

The term social media is typically used to describe a variety of electronic media resources that are intended for use in both

* Corresponding author.

E-mail address: patric.spence@uky.edu (P.R. Spence).

creating and distributing content collaboratively. They are built upon, and take to a higher degree, a fundamental characteristic of Web 2.0; they have been promoted as a means of harnessing collective intelligence (O'Reilly and Battelle, 2009). Such social media outlets offer a platform for users to work together to create content, in part by engaging in discussions as a way of creating better content collaboratively, and by coming to a shared understanding of the content that is created. In this way, the content of these media are almost completely user-generated and user-monitored. The rapid diffusion of social media allows health related information to gain the attention of potential consumers with greater reach and at a faster rate. However, with this speed and user-monitoring comes issues about the credibility of sources.

Perceived source credibility is defined as “judgments made by a perceiver...concerning the believability of a communicator” (O'Keefe, 1990, p. 181). Three dimensions of perceived source credibility are generally represented in previous research: expertise/competence (the perception that a person knows the truth), trustworthiness (the perception that a person will tell the truth if they know it), and goodwill (the perception that a person cares about the perceiver) (McCroskey and Teven, 1999). Despite the fact that source credibility has been examined in many contexts – such as interpersonal, persuasion, public health messages, and political campaigning – little is known about how people make sense of source credibility in social media contexts (Westerman, Spence, & Van Der Heide, 2012). One issue that may enhance source credibility for specific populations in social media contexts is ethnic identity.

1.2. Differences in credibility perceptions

Audience segmentation is the process of dividing large groups of people into smaller, more homogeneous subgroups by demographic, behavioral, psychosocial, geographic, and ethnic characteristics (Kreuter & McClure, 2004). As noted by Hinyard and Kreuter (2007), traditional persuasion research indicates a positive relationship between similarity of the “source and receiver of a persuasive message and perceived expertise of the source on the persuasive topic generally facilitate persuasion (Alpert & Anderson, 1973; Rogers & Bhowmik, 1970; Simons, Berkowitz, & Moyer, 1970; Wilson & Sherrell, 1993)” (p. 785). This is supported by research suggesting that ethnic-specific messages enhance the effectiveness of health communication strategies.

Experimental studies have manipulated ethnicity to examine the ways in which the race of a communicator impacts impression formation. Herek et al. (1998) found that African Americans evaluated AIDS educational videos as significantly more credible, attractive, of higher quality, and more favorably overall when the message was delivered by an African American announcer as opposed to a Caucasian announcer, especially when the message was ethnically targeted. In this same study, Caucasians did not rate messages higher based on ethnicity of the communicator. Anderson and McMillion (1995) looked at the impact of similar and other-race modeling in breast self-examination educational videos on African American women. Perceptions of source credibility, appropriateness, efficacy expectations, and personal relevance were greater when the physician was an African American female as opposed to a Caucasian or Hispanic male, or an unseen narrator.

In addition to traditional media health messages, several studies have examined how Caucasians and African Americans view ethnic-specific sites (manipulated with racial cues in the instructions, website title, and pictures). Appiah (2003) found that African Americans did not evaluate White or Black targeted sites differently, but recalled more factual information and spent longer browsing on Black-targeted sites; whites were equally attentive to the White and Black specific sites. A follow-up study (Appiah,

2004) revealed that African Americans with strong ethnic identities spent more time browsing sites and viewing stories if the site was targeted toward African Americans. They also indicated that they found the site and the content more favorable when the messages were Black specific. These findings support the notion that African Americans, respond more favorably to ethnic-specific messages conveyed by someone with characteristics similar to their own, especially when they have a strong ethnic identity. These findings support the similarity-attraction hypothesis, which states that levels of physical attractiveness, intelligence, interests, and attitudes will be shared among friends because people are attracted to similar others (Byrne, 1969). Similar results have been found in computer-mediated environments.

Research suggests that similarity, whether perceived or actual, may have a significant impact on the interactions between humans and computer agents. Similarities between individuals and computer agents have been examined in regards to personality, behavior, and appearance. Behrend and Foster Thompson (2011) looked at the effect of similarity for both appearance and behavior. The researchers had participants complete an online training program with a computer agent to measure whether an individual preferred and/or learned better from an agent that was similar to them. Those who perceived the agent to be similar to them in regards to feedback giving behavior showed significant and positive effects related to their reaction to the training, level of engagement, and overall liking of the computer agent. Nass, Moon, Fogg, Reeves, and Dryer (1995) also found that individuals preferred and were more satisfied with a computer agent when it matched their personality type; i.e., a dominant person preferred a dominant computer personality, and a submissive person preferred a submissive computer personality. Further research by Nass and Lee (2001) focused specifically on computer-synthesized speech and perceptions of personality similarity, where only auditory cues were present. In this experiment, participants were assigned a computer whose voice was considered either introverted or extroverted. Participants were able to correctly identify which type of personality the voice of the computer was, and preferred the personality type that matched their own, viewing it as more credible.

Additional research on similarity by Van Vugt (2010) studied the effect that facial similarity had on participants' responses to a computer agent. Participants were assigned to two computer agents; one was created to look like them, and the other was dissimilar to their appearance. Participants were either given agents that were helpful, or agents that were unhelpful in the assigned task. In the condition where the agent had facial similarity to the user and was helpful, participants indicated higher levels of involvement. For females, this effect was consistent regardless of the agent's helpfulness. However, males rated agents with similar features to their own more negatively when the agent was unhelpful. Thus, similarity may only be beneficial if the agent is perceived as an aid versus an obstruction. However, like perceived similarity, ethnic identification may influence perceptions of source credibility.

1.3. Ethnic identity

A tremendous amount of variance can be detected across individuals in terms of their level of ethnic identity (Gong, 2007; Sadowsky, Kwan, & Pannu, 1995). Previous research in advertising, marketing, and consumer behavior has outlined the associations between ethnic identity, attitudes toward products, and subsequent behavior change (Deshpande, Hoyer, & Donthu, 1986; Donthu & Cherian, 1992). Moreover, several studies suggest one's level of ethnic identity may predict preference for content delivered by those of similar race (Arpan, 2002; Deshpande & Stayman, 1994; Whittler, 1991).

Ethnic identification is a concept that has been assigned a broad range of definitions. Past research has shown that ethnicity focuses on a sense of belonging and self-categorization (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). This sense of belonging means that individuals are able to feel a social connection to a certain group of people through common beliefs, activities, and rituals. The concept of self-categorization posits that individuals are able to independently identify connections to particular groups based on self-evaluation.

When examining ethnic identification, other concepts are produced from an individual's identification. In other words, once an individual identifies with a certain group, some assumptions can be made (Valk & Karu, 2001). One assumption is that an individual, once self-identified, is able to express their ethnicity publicly and privately (Yogeeswaran, Dasgupta, Adelman, Eccleston, & Parker, 2011), meaning that an individual's ethnicity can be observed by the public or expressed to the public. The individual should also be able to express their ethnicity in the private setting, which is likely to occur among the group with which they identify.

Another product of ethnic identification is the sense of belonging and connection to the cultural community (Phinney, 1990). This feeling gives individuals a way to collectively group together as a community. The significance of this component is that once an individual feels they belong to a certain group, they are more likely to be involved and feel a sense of motivation to interact within their group. Ethnic identification allows for individuals to find a sense of social belonging and connection with others who share common ground.

Ethnic identification has been shown to be a predictor of content favorability in online environments. Specifically, Appiah (2004) found that levels of ethnic identification were related to responses to websites targeted at specific ethnic groups. Thus, African American individuals with a high ethnic identity should indicate greater favorability for African American models. This appreciation should ultimately result in a higher perception of credibility for in-group models than out-group models. Alternatively, it could be expected that African Americans with low ethnic identities may exhibit attitudes and beliefs not closely connected to traditional African American culture, and in turn may more closely resemble the dominant White culture (Appiah, 2004; Green, 1999). African Americans with low ethnic identities may rate African American models as less credible than their ethnic identifier counterparts. Research indicates that African Americans with a high sense of ethnic identity perceive themselves as similar to, and indicate greater interpersonal liking for black media and characters (Appiah, 2004) than do African Americans with low ethnic identities. Therefore, ethnic identity appears to be a factor that influences liking, similarly, and perceived credibility in African American audiences.

In social media environments, one way to look at ethnicity is as a form of impression management. It can be communicated in social media, most obviously through user-generated cues, and possibly supported and bolstered through other-generated cues (Gosling, Ko, Mannarelli, & Morris, 2002). Although user-generated cues may be a popular way for individuals to express ethnic identity, other-generated cues may be more persuasive.

According to Walther and Parks' (2002) "warranting hypothesis," other-generated cues are often judged as more objective, valid, and reliable since they are not sanctioned or controlled by the owner. "The more immune information is to manipulation, the higher the warranting value of the information" (Utz, 2010, p. 315–316), suggesting that posts from friends will have a higher impact on viewers' impressions than information posted by the profile owner. Harris, Barnier, and Sutton (in press) note that other-generated cues are most effective when they overlap with the profile owner's self-generated information.

In regard to social media, warranting plays an important role when judging interpersonal traits (e.g., trustworthiness, sociability, extroversion). Several experiments have looked at the effects of cues generated by others upon impression formation (Walther, Van Der Heide, Hamel, & Shulman, 2009; Walther, Van Der Heide, Kim, Westerman, & Tong, 2008). In these particular studies, physical appearance and behavior of friends was manipulated. The friends were either attractive or unattractive and posted positive or negative messages on the owner's wall. Though self-generated information and negativity/additivity had an impact on the viewer's perceptions, the results showed a clear warranting effect. More attractive and positive other-generated information led to higher impressions of physical attractiveness, social attractiveness/extra-version, task attractiveness, and credibility of the profile owner.

Although previous research indicates similarity between the source and user in online environments is positively related to liking, it is not known what role ethnic identity plays in this relationship. The conveyance of ethnic identity in social media may be a means to bolster the credibility perceptions of a social media page owner within the African American community; therefore, the following research question is offered:

RQ1: What impact does avatar ethnic identity have on the perceptions of credibility among African American and Caucasian audience members?

2. Methods

2.1. Overview

In order to test the research question offered, a two condition quasi-experiment was designed and executed. Participants were recruited from undergraduate classes, through social media, and email. Upon following the link to the study, participants read the statement of informed consent. After clicking on a button labeled "Begin Study," participants were directed to a JavaScript program that randomly assigned participants to view one of two mock Facebook.com pages.

Participants were told that upon navigating to the next page they would first view someone's Facebook profile (the Facebook.com pages were designed to reflect the timeline update which was becoming the standard page for Facebook members), and the second page would be the first story from the profile owner's wall. Participants were instructed to take time in examining the page and reading the article.

The mock Facebook.com page was created to represent a user whose first entry on their timeline promoted an article on the dangers of ticks and Lyme disease for the upcoming summer. Participants were randomly assigned to view either a page with an African American profile owner who possessed a high level of ethnic identity, or an African American profile owner with low ethnic identity (see Figs. 1 and 2). Ethnic identity was communicated through other-generated cues. This was accomplished through the posting of several stories that were relevant to the African American community at the time of the experiment, such as coverage of President Obama by traditionally Black media, the Black church and same sex marriage, and body style among African American women. The low ethnic identity condition featured almost all the same comments and other-generated cues, except the stories posted to the profile owner's timeline by others lacked any reference or subject matter to ethnicity. Examples from this condition include stories about the Atlanta Braves trade scenarios, the Facebook IPO, a ban on the use of plastic bags, and Justin Bieber. All the stories were posted by the profile owner's friends. The comments about the story were all from friends of the profile owner to keep the owner of the profile neutral on her communication of

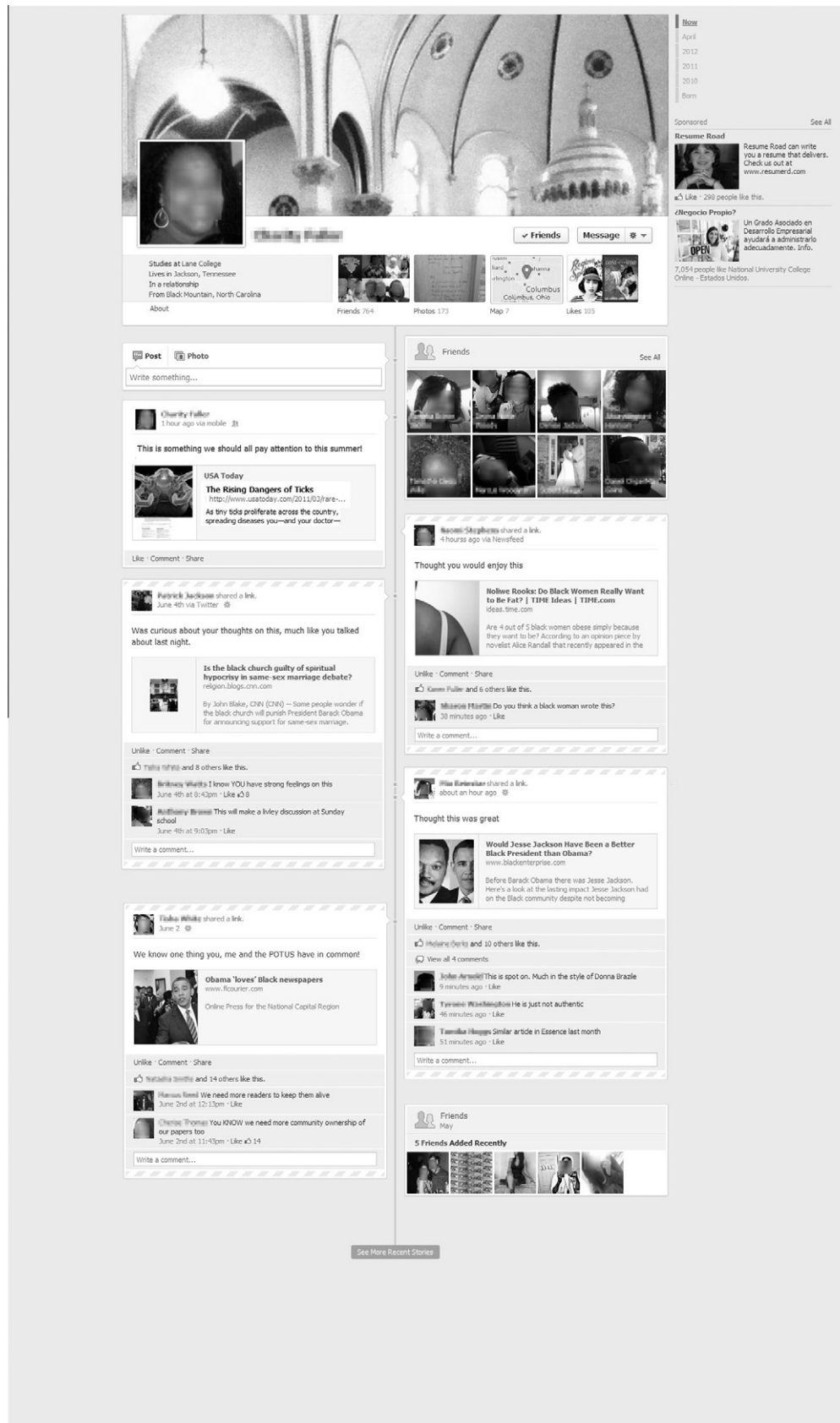


Fig. 1. High ethnic identity profile.

ethnic identity. The only user-generated content on the page timeline was the story about the dangers of ticks. This user-generated

content was the first story posted by the profile owner on her timeline. It was constructed to appear as a *USA Today* story on the

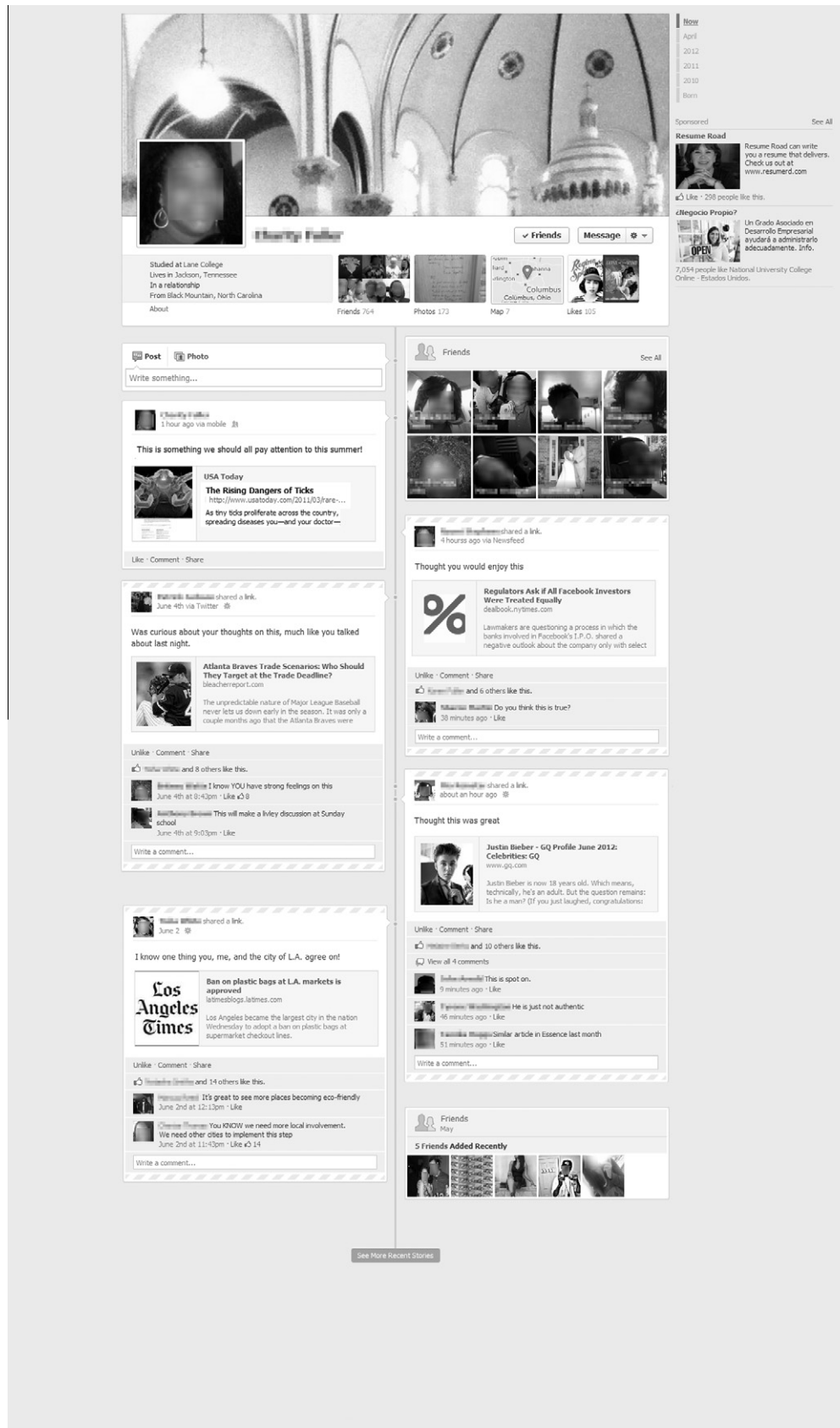


Fig. 2. Low ethnic identity profile.

dangers of ticks and Lyme disease. The Lyme disease story was chosen in order to contrast the findings with those of Spence

et al. (2013), which used a health topic that was especially germane to the African American community (heart disease). To eliminate

any effects that may be attributed to the health topic itself, the current study used the dangers of ticks and Lyme disease because it represented a health related topic that is comparably relevant for both African Americans and Caucasians.

2.2. Instrumentation

After viewing the mock Facebook.com page, participants were asked to respond to a measure of source credibility containing three separate constructs: competence, goodwill, and trustworthiness (McCroskey & Teven, 1999). Six semantic differential items were used to measure each construct, anchored with two antonyms (i.e., Self-centered–Not self-centered) using a seven-point response scale ranging from 1 to 7. The items formed unidimensional solutions for competence ($\alpha = .86$), goodwill ($\alpha = .87$), and trustworthiness ($\alpha = .90$). These served as the dependent variables in the study.

Participants were then asked a series of demographic identifiers, such as ethnicity and sex. The demographic composition of the sample included 199 Caucasians and 100 African Americans (along with 26 participants who indicated other races, which were subsequently removed from the analyses). The level of avatar ethnic identity (High vs. Low) and participant ethnicity (Caucasian vs. African American) served as the independent variables.

3. Results

In order to determine the best course of action for the analysis plan, a simple correlation matrix was performed on the three dependent variables. The results indicated that perceptions of competence, goodwill, and trust were all strongly correlated (see Table 1). Further, it was determined that given the research questions, statistical controls should be implemented for demographic variables other than the key independent variable of participant ethnicity. For this reason, the analyses consisted of a 2×2 multivariate analysis of covariance (MANCOVA), exploring the separate and combined impact of ethnicity and avatar ethnic identity on perceptions of competence, goodwill, and trust, while controlling for gender, age, and income.

Omnibus multivariate tests did not present evidence of significant main effects for condition, $F(3, 282) = 1.10$, *n.s.*, nor did they indicate significant main effects for ethnicity, $F(3, 282) = 0.57$, *n.s.* They did, however, reveal a significant interaction effect between the two factors, $F(3, 282) = 2.794$, $p < .04$, $\eta^2 = .03$, Wilks' $\lambda = .970$. Individual tests of between subjects effects failed to reveal an interaction effect for condition and ethnicity on perceived competence, $F(1, 291) = 2.26$, *n.s.* Significant interactions effects were detected on both goodwill, $F(1, 291) = 8.70$, $p < .01$, $\eta^2 = .03$, and trust, $F(1, 291) = 4.04$, $p < .03$, $\eta^2 = .02$. An examination of the means indicate that African American respondents reported higher levels of both perceived goodwill and trust in the higher ethnic identity condition, while Caucasian respondents reported higher levels of perceived goodwill and trust in the lower ethnic identity conditions (Table 2). The control variables did not account for a significant proportion of the variance in any of the models.

Table 1
Dependent variables.

	Competence	Goodwill	Trust
Competence	----		
Goodwill	.599	----	
Trust	.625	.658	----

All correlations significant at $p < .01$.

Table 2
Interaction effects on goodwill and trust.

	Ethnic identity	
	Lo	Hi
<i>Goodwill</i>		
Participant ethnicity		
White	4.59 (0.11)	4.20 (0.10)
Black	4.23 (0.15)	4.58 (0.15)
<i>Trust</i>		
Participant ethnicity		
White	4.99 (0.09)	4.77 (0.96)
Black	4.72 (0.14)	5.05 (1.34)

4. Discussion

The findings from this study support and extend a number of findings and considerations in regard to credibility and social media. Results suggest that African American avatars conveying a high level of ethnic identity were, for the most part, found to be more credible by African American respondents. Caucasian respondents, on the other hand, reported the highest levels of perceived credibility in the low ethnic identity condition.

This finding is particularly noteworthy when placed alongside the Spence et al. (2013) study. In the previous study, African American respondents provided especially positive evaluations of Caucasian avatars providing information on heart disease. When compared to the findings of the current study, it could be argued that avatar ethnic identity moderates this relationship. This makes sense, given past research on ethnic identity and evaluation of persuasive messages and products, which suggest that African Americans would respond more favorably to those with high ethnic identity. Moreover, the other finding is that high ethnic identity African Americans pushed the Caucasian respondents in the opposite direction.

Although the mean differences are not enormous, the interaction effect reveals that Caucasian respondents reported lower levels of trust and lower perceptions of goodwill in their evaluation of avatars with high ethnic identity. It may be the case that in establishing ingroup identity among some, the use of high ethnic identity actually pushes audience members of different ethnic identities to the margins. It could also be the case that high levels of ethnic identity indicated by minority avatars may prime or evoke standing stereotypes and biases among Caucasian audiences. This could be argued as being a form of aversive racism (Gaertner & Dovidio, 1986; Pearson, Dovidio, & Gaertner, 2009), where Caucasians hold egalitarian conscious, or explicit values and attitudes while simultaneously possessing negative unconscious, or implicit, racial attitudes. Thus, the Caucasian respondents may work to outwardly demonstrate that they hold no prejudice, and try not to show partiality in situations where it would be obvious to others and to themselves. However, the unconscious attitudes and beliefs held by aversive racists may lead to discrimination in situations where the norms surrounding appropriate behavior are unclear, or when the criteria for social judgment is ambiguous, such as ascribing source credibility. In an attempt to keep balance and consonant beliefs (i.e., "I am not a racist"), Caucasians rated the African American avatar as credible, (in each of the conditions the mean score is well above the scale midpoint), but the condition with the higher expressed ethnic identity was rated as less credible. While this finding may be unsettling, it does align with other previous studies (Corbie-Smith, Thomas, Williams, & Moody-Ayers, 1999; Doescher, Saver, Franks, & Fiscella, 2000).

Alternately, it may be the case that issue involvement is a moderating variable that needs to be examined further. Spence et al. (2013) used health messages concerning heart disease prevention as their stimulus material. As explained in their findings, respondents may consider issue relevance when making assessments of the individuals delivering the message. In that particular study, they offer that African American viewers may be surprised to see a Caucasian providing information targeted at African Americans, and thus rate their credibility and goodwill as especially high. In the current study, the health messages under examination concerned a health threat that is not specifically germane to either the African American or Caucasian communities (Lyme disease). Given increased awareness of the prevalence of heart disease in the African American community, it may explain why participants in the Spence et al. (2013) study had substantially different responses than those in the current study. The current data would suggest that in the case of health risks for which African Americans and Caucasians are at roughly equal risk, the results are a bit more predictable in terms of the impact of avatar ethnic identity on audience responses. This is, however, an empirical question. Future research on these variables should attempt to directly measure issue involvement to see if it moderates these relationships.

Caucasian participants perceived the avatar with high ethnic identity as less credible than the low ethnic identity avatar. These findings are consistent with research examining the public and private expression of ethnic identification between Caucasians and minorities in the U.S. Yogeeswaran et al. (2011) found that at an unconscious level of cognitive processing, Caucasians did not identify with minorities (non-White) when their ethnicity was expressed publicly. Their data indicated that the more ethnicity was expressed, the less likely it was that the person was accepted by Caucasians as inclusive of mainstream culture.

In this study, other-generated cues were used as an expression of ethnicity. Most of the content (excluding pictures) used language to express ethnicity. This was consistent with Fishman's (1999) and Haarman's (1986) research identifying language as a strong channel for the expression of ethnicity. Therefore the expression of high ethnic identity on the timeline may have led to a gap between Caucasian participants and highly identified African American profiles. Additionally, the low ethnic identification profile was perceived as more credible, as Caucasian participants could identify with a profile that included a lower expression of ethnicity.

A lack of cultural transcendence and interaction with diverse cultures (in this case the African American community) is another possible contributor to the reduced credibility perception given to the high ethnic profile (Hendrix, 1997). The results are consistent with the notion that when Caucasian individuals are not familiar with another culture and have had a minimum amount of interaction with minorities, a lower amount of credibility may be attributed to that individual, especially when a high amount of ethnicity is expressed.

Past studies have also indicated that African Americans, African American women in particular, respond more positively to health messages and campaigns that they believe to be specifically targeted toward their community (Frisby, 2002). This further supports the notion that generalized information campaigns with little regard for target audiences are less effective with underrepresented groups. In response to these studies and others, numerous authors have argued that risk and health communication practitioners should work to design messages tailored specifically to the African American community, and that feature African American spokespersons (Burke, Spence, & Lachlan, 2010; Spence, Lachlan, & Griffin, 2007; Spence et al., 2011).

In terms of the findings for credibility, the results of the current study strengthen the evidence for the use of avatars and spokes-

persons who are representative of those in at-risk communities or underserved populations. Specifically, the findings support the argument for tailoring messages based on the target audience in question. African American respondents indicated higher levels of credibility for the condition with the avatar communicating high levels of ethnic identity. Although lower than the scores for African American respondents, Caucasians indicated a mean score well above the scale midpoint. The danger of ticks (to use this case as an example) is a risk that members of the African American and Caucasian community are equally susceptible to, but is not terribly salient to either community. The results support the notion that health and risk practitioners could use spokespersons tailored for an at-risk audience, knowing that the results would likely be more effective for that specific audience, without necessarily compromising their effectiveness on others. As past research suggests, African Americans are more attracted to media with similar characters (Appiah, 2001), and are more likely to identify with African American television characters (Greenberg & Atkin, 1982). At the same time, the results suggest that, in the aggregate, Caucasian audiences may still respond favorably to these messages, though not as favorably as they might to messages containing a Caucasian avatar or with an avatar displaying low levels of ethnic identity.

Research investigating the effects of a model's race on Caucasian audiences has not produced consistent results. Although some research indicates that there is no preference or differences in behaviors among Caucasian viewers when viewing a dissimilar racial model, a substantial amount of research indicates Caucasian respondents evaluate messages with similar models more favorably. As noted above, the role of both issue relevance and standing stereotypes in these processes deserves more research attention. The extent to which these variables interact with spokesperson ethnic identity is particularly relevant, and future research should attempt to disentangle this complex interplay of variables. Doing so may help health communication professionals better design and place messages targeted at specific, high-risk populations.

5. Conclusion

In summation, the findings provide an initial glimpse into the underlying processes that may be at play when evaluating the effectiveness of health messages on diverse and historically underrepresented audiences. Although a long history of persuasion and public health research has posited a link between perceptions of similarity and compliance, until recently little research has examined the role of ethnic identity and the effect of this spokesperson attribute on subsequent attitudinal responses.

The current findings offer some evidence that increased levels of ethnic identity may augment the perceived credibility of spokespersons delivering health information across social media. For those considering public health campaigns targeted at a specific, high-risk subpopulation, this finding has clear significance. By the same token, there are several questions left unanswered by the current study. First, the current body of knowledge, including this study, revolves around the use of high ethnic identity avatars in computer mediated health messages. Future research should attempt to examine whether or not these effects hold up in other media.

Second, the current study is not a fully crossed design. Although the interaction effect for participant ethnicity and avatar ethnic identity is important, the current study relied solely on an African American avatar. It would be of further theoretical interest to investigate whether or not this interaction effect holds for Caucasian avatars, thus necessitating a fully crossed replication. It would also be worthwhile to consider respondent ethnic identity as a covariate, to see if the level of attachment to one's own ethnic

identity influences responses to avatars who may or may not vary from that position.

The study only looks at the responses of African American and Caucasian respondents to an African American avatar, and manipulates ethnic identity as high versus low. While this study is a good first step, it is perhaps more ecologically valid to consider spokesperson ethnic identity as existing along a continuum, and future studies should consider using pre-tested ethnic identity manipulations that represent a broader range of spokesperson ethnic identity. Finally, this program of research should be extended to include both audience members and health spokespersons of numerous other ethnicities, in order to explore the impact of ethnic identity on source credibility attributions across an array of diverse groups. Although this study presents clear implications for health communication practitioners and social media, it is a first step in what will likely be a long program of research investigating this spokesperson attribute on attitude change across a variety of contexts and for a diverse range of audiences.

References

- Alpert, M. I., & Anderson, W. T. (1973). Optimal heterophily and communication effectiveness: Some empirical findings. *Journal of Communication*, 23, 328–343.
- Anderson, R. B., & McMillion, P. Y. (1995). Effects of similar and diversified modeling on African American women's efficacy expectations and intentions to perform breast self-examination. *Health Communication*, 7, 327–343.
- Appiah, O. (2001). Black, white, hispanic, and Asian American adolescents' responses to culturally embedded ads. *Howard Journal of Communications*, 12, 29–48. <http://dx.doi.org/10.1080/10646170117577>.
- Appiah, O. (2003). Americans online: Differences in surfing and evaluating race-targeted web sites by Black and White users. *Journal of Broadcasting and Electronic Media*, 47(4), 534–552.
- Appiah, O. (2004). Effects of ethnic identification on web browsers attitudes toward, and navigational patterns on, race-targeted sites. *Communication Research*, 31(3), 312–337.
- Arpan, L. M. (2002). When in Rome? The effects of spokesperson ethnicity on audience evaluation of crisis communication. *Journal of Business Communication*, 39, 314–339. <http://dx.doi.org/10.1177/002194360203900302>.
- Behrend, T. S., & Foster Thompson, L. (2011). Similarity effects in online training: Effects with computerized trainer agents. *Computers in Human Behavior*, 27, 1201–1206.
- Burke, J. A., Spence, P. R., & Lachlan, K. A. (2010). Crisis preparation, media use, and information seeking during Hurricane Ike: Lessons learned for emergency communication. *Journal of Emergency Management*, 8, 27–37.
- Byrne, D. (1969). Attitudes and attraction. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 4, pp. 35–89). New York: Academic Press.
- Cline, R. J. W., & Haynes, K. M. (2001). Consumer health information seeking on the internet: The state of the art. *Theory and Practice*, 16, 671–692.
- Corbie-Smith, G., Thomas, S. B., Williams, M. V., & Moody-Ayers, S. (1999). Attitudes and beliefs of African Americans toward participation in medical research. *Journal of General Internal Medicine*, 284, 537–546.
- Deshpande, R., Hoyer, W. D., & Donthu, N. (1986). The intensity of ethnic affiliation: A study of the sociology of Hispanic consumption. *Journal of Consumer Research*, 13, 214–220.
- Deshpande, R., & Stayman, D. M. (1994). A tale of two cities: Distinctiveness theory and advertising effectiveness. *Journal of Marketing Research*, 31, 57–64.
- Doescher, M. P., Saver, B. G., Franks, P., & Fiscella, K. (2000). Racial and ethnic disparities in perceptions of physician style and trust. *Archives of Family Medicine*, 9, 1156–1163.
- Donthu, N., & Cherian, J. (1992). Hispanic coupon usage: The impact of strong and weak ethnic identification. *Psychology and Marketing*, 9(6), 501–510.
- Fishman, J. (1999). *Handbook of language and ethnic identity*. New York: Oxford University Press.
- Fox, S., & Fallows, D. (2003). Internet health resources (Pew Internet & American Life Project). <http://www.pewinternet.org/>.
- Fox, S., & Jones, S. (2009). The social life of health information: Americans' pursuit of health takes place within a widening network of both online and offline sources. *Pew internet and American life project: An initiative of the pew research center*. http://www.pewinternet.org/~media/Files/Reports/2009/PIP_Health_2009.pdf.
- Fox, S., & Rainie, L. (2000). *The online health care revolution: How the web helps Americans take better care of themselves*. Washington, DC: Pew Charitable Trusts.
- Frisby, C. M. (2002). Messages of hope: Health communication strategies that address barriers preventing black women from screening for breast cancer. *Journal of Black Studies*, 32, 489–505.
- Gaertner, S. L., & Dovidio, J. F. (1986). The aversive form of racism. In J. F. Dovidio & S. L. Gaertner (Eds.), *Prejudice, discrimination, and racism* (pp. 61–89). Orlando, FL: Academic Press.
- Gong, L. (2007). Ethnic identity and identification with the majority group: Relations with national identity and self-esteem. *International Journal of Intercultural Relations*, 31(4), 503–523.
- Gosling, S. D., Ko, S. J., Mannarelli, T., & Morris, M. E. (2002). A room with a cue: Personality judgments based on offices and bedrooms. *Journal of Personality and Social Psychology*, 82(3), 379.
- Green, C. L. (1999). Ethnic evaluations of advertising: Interaction effects of strength of ethnic identification, media placement, and degree of racial composition. *Journal of Advertising*, 28, 49–64.
- Greenberg, B. S., & Atkin, C. (1982). Learning about minorities from television: A research agenda. In G. Berry & C. Mitchell-Kernan (Eds.), *Television and the socialization of the minority child* (pp. 215–243). New York: Academic Press.
- Haarman, H. (1986). *Language in ethnicity*. Berlin, Germany: Mouton de Gruyter.
- Harris, C. B., Barnier, A. J., & Sutton, J. (in press). Shared encoding and the costs and benefits of collaborative recall. *Journal of Experimental Psychology: Learning, Memory and Cognition*. doi: <http://dx.doi.org/10.1037/a0028906>.
- Hendrix, K. (1997). Student perceptions of verbal nonverbal cues leading to images of black and white professor credibility. *Howard Journal of Communications*, 8(3), 251–273.
- Herek, G. M., Gillis, J., Glunt, E. K., Lewis, J., Welton, D., & Capitanio, J. P. (1998). Culturally sensitive AIDS educational videos for African American audiences: Effects of source, message, receiver, and context. *American Journal of Community Psychology*, 26(5), 705–743. <http://dx.doi.org/10.1023/A:1022157914906>.
- Hinyard, L. J., & Kreuter, M. W. (2007). Using narrative communication as a tool for health behavior change: A conceptual, theoretical, and empirical overview. *Health Education and Behavior*, 34(5), 777–792.
- Kivits, J. (2009). Everyday health and the internet: A mediated health perspective on health information seeking. *Sociology of Health and Illness*, 31, 673–687. <http://dx.doi.org/10.1111/j.1467-9566.2008.01153.x>.
- Kreuter, M. W., & McClure, S. M. (2004). The role of culture in health communication. *Annual Review of Public Health*, 25, 439–455.
- McCroskey, J. C., & Teven, J. J. (1999). Goodwill: A reexamination of the construct and its measurement. *Communication Monographs*, 66, 90–103.
- Nass, C., & Lee, K. M. (2001). Does computer-synthesized speech manifest personality? Experimental tests of recognition, similarity-attraction, and consistency-attraction. *Journal of Experimental Psychology: Applied*, 7(3), 171–181. <http://dx.doi.org/10.1037/1076-898X.7.3.171>.
- Nass, C., Moon, Y., Fogg, B. J., Reeves, B., & Dryer, D. C. (1995). Can computer personalities be human personalities? *International Journal of Human-Computer Studies*, 43, 223–239.
- Neuhauser, L., & Kreps, G. L. (2003). Rethinking communication in the e-health era. *Journal of Health Psychology*, 8, 7–23.
- Nielsen (2011). *State of the media: The social media report*. <http://www.nielsen.com/content/corporate/us/en/insights/reports-downloads/2011/social-media-report-q3.html>.
- O'Keefe, D. J. (1990). *Persuasion: Theory and research*. Thousand Oaks, CA: Sage.
- O'Reilly, T., & Battelle, J. (2009). *Web squared: Web 2.0 five years on*. <http://assets.en.oreilly.com>.
- Pearson, A. R., Dovidio, J. F., & Gaertner, S. L. (2009). The nature of contemporary prejudice. Insights from aversive racism. *Social and Personality Psychology Compass*, 3, 314–338.
- Phinney, J. S. (1990). Ethnic identity in adolescence and adulthood: A review of research. *Psychological Bulletin*, 108, 499–514.
- Rogers, E. M., & Bhowmik, D. K. (1970). Homophily-heterophily: Relational concepts for communication research. *Public Opinion Quarterly*, 34(4), 523–538.
- Simons, H. W., Berkowitz, N. N., & Moyer, R. J. (1970). Similarity, credibility, and attitude change: A review and theory. *Psychological Bulletin*, 73(1), 1–16.
- Sodowsky, G. R., Kwan, K. K., & Pannu, R. (1995). Ethnic identity of Asians in the United States. In J. G. Ponterotto, J. M. Casas, L. A. Suzuki, & C. M. Alexander (Eds.), *Handbook of multicultural counseling* (pp. 123–154). Thousand Oaks, CA: Sage.
- Spence, P. R., Lachlan, K. A., & Burke, J. A. (2011). Differences in crisis knowledge across age, race, and socioeconomic status during Hurricane Ike: A field test and extension of the knowledge gap hypothesis. *Communication Theory*, 21, 261–278.
- Spence, P. R., Lachlan, K. A., & Griffin, D. (2007). Crisis communication, race and natural disasters. *The Journal of Black Studies*, 37, 539–554.
- Spence, P. R., Lachlan, K. A., Westerman, D., & Spates, S. A. (2013). Where the gates matter less: Ethnicity and perceived source credibility in social media health messages. *The Howard Journal of Communications*, 24(1).
- Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory*. Oxford, England: Basil Blackwell.
- Utz, S. (2010). Show me your friends and I will tell you what type of person you are: How one's profile, number of friends, and type of friends influence impression formation on social network sites. *Journal of Computer Mediated Communication*, 15(1), 314–335.
- Valk, A., & Karu, K. (2001). Ethnic attitudes in relation to ethnic pride and ethnic differentiation. *The Journal of Social Psychology*, 141(5), 583–601.
- Van Vugt, H. C., Bailenson, J. N., Hoorn, J. F., & Konijn, E. A. (2010). Effects of facial similarity on user responses to embodied agents. *ACM Transactions on Computer-Human Interaction*, 17, 7.1–7.27. <http://dx.doi.org/10.1145/1746259.1746261>.
- Walther, J. B., & Parks, M. R. (2002). Cues filtered out, cues filtered in: Computer-mediated communication and relationships. In M. L. Knapp & J. A. Daly (Eds.),

- Handbook of interpersonal communication* (pp. 529–563). Thousand Oaks, CA: Sage.
- Walther, J. B., Van Der Heide, B., Hamel, L. M., & Shulman, H. C. (2009). Self-generated versus other-generated statements and impressions in computer-mediated communication: A test of warranting theory using Facebook. *Communication Research*, 36(2), 229–253.
- Walther, J. B., Van Der Heide, B., Kim, S.-Y., Westerman, D., & Tong, S. T. (2008). The role of friends' appearance and behavior on evaluations of individuals on Facebook: Are we known by the company we keep? *Human Communication Research*, 34, 28–49.
- Westerman, D., Spence, P. R., & Van Der Heide, B. (2012). A social network as information: The effect of system generated reports of connectedness on credibility on Twitter. *Computers in Human Behavior*, 28(1), 199–206. <http://dx.doi.org/10.1016/j.chb.2011.09.001>.
- Whittler, T. E. (1991). The effects of actors' race in commercial advertising: Review and extension. *Journal of Advertising*, 20, 54–60.
- Wilson, E. J., & Sherrell, D. L. (1993). Source effects in communication and persuasion research: A meta-analysis of effect size. *Journal of the Academy of Marketing Science*, 21(2), 101–112.
- Yogeeswaran, K., Dasgupta, N., Adelman, L., Eccleston, A., & Parker, M. T. (2011). To be or not to be (ethnic): Public vs. private expressions of ethnic identification differentially impact national inclusion of white and non-white groups. *Journal of Experimental Social Psychology*, 47, 908–914.