Do Black Lives Matter in the Empathy Machine? Creating a Shared Reality to Disrupt Whiteness with Immersive 360-Degree Videos

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Student Bio (96 words): Haley R. Hatfield is a second-year PhD student at the Grady College of Journalism and Mass Communication. Her research primarily explores race-related media effects with an emphasis on Whiteness. With her background in digital art (MFA, Louisiana State University), she creates virtual experiences coupled with psychophysiological measures to examine attitudes influenced by Whiteness to aim toward more prosocial behaviors and anti-racist attitudes. She is a recipient of Top Papers in the Human Communication & Technology Division at the 2021 National Communication Association Annual Conference and the Information Systems Division at the 2022 International Communication Association Annual Conference.

Faculty Bio (102 words): Sun Joo (Grace) Ahn (Ph.D., Stanford University) is an Associate Professor at the Grady College of Journalism and Mass Communication, University of Georgia, and founding director of the Games and Virtual Environments Lab. Her main program of research investigates how interactive digital media such as virtual and augmented reality transform traditional rules of communication and social interactions, looking at how virtual experiences shape the way that people think, feel, and behave in the physical world. Her work is supported by the NSF, NIH, NOAA, and EPA and is published in numerous top-tier outlets in the fields of communication, health, and engineering.

Abstract (275 words): The summer of 2020 brought increased participation and support for the Black Lives Matter (BLM) movement following accounts of police use of lethal force toward Black individuals. As protests spread, many white people realized their lived experiences were different from Black Americans. Unfortunately for some, this realization did not last longer than

a viral trend on social media. Whiteness, the societal formations embedded from past colonialism and white domination, may control much of the narrative surrounding prosocial movements like BLM and restrain some individuals from sharing an antiracist worldview. This study aims to decenter Whiteness to test two competing theoretical frameworks and examine how a shared reality with a Black or white speaker delivering an antiracist message can be supported or hindered with immersive 360-degree video platforms. Pilot data with student samples showed that greater immersion could cause adverse reactions toward a white speaker but not a Black speaker. However, these initial findings should be investigated beyond student samples and include a broader, more diverse population. This proposal seeks to build from pilot investigations to 1) understand the relationship between immersive 360-videos and prosocial attitudes and behaviors, 2) explore the underlying affective processes with psychophysiological measurements, and 3) recruit a representative non-student sample to understand how creating a shared reality can disrupt Whiteness and promote prosocial behaviors. The expected results will inform journalism and mass communication research about Whiteness and immersion's role in creating a shared reality relating to antiracist worldviews. Expected results could also provide evidence of how virtual environments can promote support for organizations like Black Lives Matter and potentially highlight the processes necessary for amplifying suppressed voices within excluded communities more generally.

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Scope, Purpose, and Support for the 2022 Theme (1406 words total)

Whiteness, the societal and cultural formations embedded from past colonialism and white domination, may restrain some individuals from sharing an antiracist worldview and supporting prosocial movements' narrative, such as Black Lives Matter (BLM). Even though support for BLM has grown in the United States since the summer of 2020, the support from many white people and major news networks and companies failed to sustain critical conversations about the detriments of Whiteness. Whiteness conceals white cultural and societal norms as standardized benchmarks for comparison which deliberately maintains systemic privileges for those who qualify as white while simultaneously suppressing those that do not (hooks, 1997; Rabaka, 2007; Frankenburg, 1993). Whiteness may be a factor in the lack of ongoing conversations toward racial equity.

Media scholars are turning to virtual environments to facilitate empathy and encourage people to experience and understand structural inequities (Ma, 2020; Herrera & Bailenson, 2021). Multimedia platforms that provide more *immersion* (i.e., layers of sensorimotor information, Lombard & Ditton, 1997), such as 360-degree videos, have shown promise in increasing prosocial behavior by sharing different perspectives to connect with vulnerable and excluded populations (Pimental et al., 2021; Steinfeld, 2020). These connections can be enhanced through *spatial presence*, wherein users feel "there" in the virtual environment (Lombard & Ditton, 1997), and *social presence*, wherein users feel as if a virtual partner exists in the same place with them (Steinfeld, 2020; Ma, 2020).

In a recent study investigating first-person point-of-view footage from body-worn cameras of police officers, Bailey et al. (2021) found that this footage exacerbated racial biases against dark skin tone citizens. These results imply that shared experiences through the perspective of a police officer, or other authoritative positions, may be harmful, and underscore the importance of seeking an alternate approach that does not require taking the identity of someone, but rather, *constructing* a shared reality to influence a shared worldview (Echterhoff et al., 2009).

A shared reality is a harmony achieved through exchanging experiences of individuals' inner states about some event, object, or person. The stronger the shared reality, the more motivated people feel to set themselves on the "right" path. Establishing a shared reality does not ask people to take the perspective of another or empathize with someone's plights, but instead to construct a common view of the world. The current proposal seeks to recruit a diverse, community sample to build from pilot study results with a student population to test the efficacy of 360-degree BLM protest videos in establishing a shared reality between individuals and featured speakers to encourage critical engagement with contentious and uncomfortable social issues.

By recruiting a community-representative sample, we aim to assess the extent to which the interaction between media characteristics (immersion) and speaker characteristics (race) elicits perceptions of the media environment (e.g., spatial presence, social presence) and the speaker (e.g., liking, trustworthiness). We will complement the 360-degree videos with psychophysiological measures such as eye-tracking, heart rate, and skin conductance, to capture underlying affective processes related to attention and arousal. Further, we investigate how these perceptions ultimately contribute to the construction of shared, albeit difficult, reality leading to

greater prosocial behaviors through intentions to advocate for and support the social justice initiatives of BLM. Investigating how the race of a speaker initiating these critical conversations can influence audience support for racial justice can shed light on the processes necessary for amplifying the suppressed voices within excluded communities and enhancing allyship.

How the Project Will Expand Knowledge

Building from initial pilot study findings, this proposal focuses on the impact of *who* delivers an antiracist message by comparing two theoretical orientations: Social Identity Theory (SIT; Tajfel & Turner, 1979) and source perceptions (Petty & Cacioppo, 1981). SIT typically groups *audiences* based on racial identity (Tajfel & Turner, 1979), centering white people as ingroups and positioning non-white people as outgroups (Ramasubramanian & Banjo, 2020). We instead acknowledge that Whiteness affects everyone regardless of race, and thus the antiracist message delivered from a white or Black *speaker* can determine social identity. Conversely, source perceptions, such as perceived trustworthiness and likeability of the source (Lachlan et al., 2013), influence message effectiveness (Farr, 2007; McCroskey & Young, 1981). The white speaker may be perceived as more similar and "standardized," eliciting more positive attitudes (SIT), or the Black speaker may be perceived as more likable and trustworthy because they are speaking from a position directly oppressed by Whiteness (source perception).

This study will expand knowledge in using immersive 360-video platforms and seek to understand the underlying processes of dismantling Whiteness to promote prosocial behaviors toward antiracist initiatives. By adding additional measurements of attitudinal and behavioral effects, we will expand the breadth and depth of research investigating virtual environments seeking to alter perceptions with facilitating a shared reality.

Description & Methods

Design

A 2 (Speaker Race: Black vs. white) x 2 (Immersion: high vs. low) between-subjects experiment will be employed. Participants will view the same 360-degree video from (Hatfield & Ahn, 2021) documenting antiracist messaging from a Black or white speaker followed by Black Lives Matter protests. The 360-degree video is created for a PC (low immersion) and an HMD (high immersion). The HP Reverb G2 Omnicept HMD provides built-in psychophysiological indices such as heart rate (HR) and eye movement responses and will be captured along with external sensors attached to the hands for electrodermal activity (EDA). For the PC conditions, HR and EDA sensors will be attached to the hands and forearms of participants while an eye movement sensor will sit atop the computer monitor.

Participants and Procedure

We anticipate a sample size of $N = 200$ and participants will be recruited from the surrounding community of a large Southeastern university in the U.S. Based on a meta-analysis (Mekawi & Bresin, 2015), an estimated sample size of at least $N = 128$ is needed to detect small effects ($d_z = 0.25$) for the difference between responses for Black versus white speakers. G*Power was used to cross-reference estimated sample sizes (Faul et al., 2007). Participants will view an antiracist message delivered from a Black or white speaker, then answer questions related to social presence, likability, and trustworthiness. Next, they will watch a 360-degree video of BLM protests and answer questions related to spatial presence, shared reality, and willingness to support and disseminate antiracist messaging. Psychophysiological responses will be triangulated with self-report measures for a comprehensive examination of implicit and explicit attitudes and behaviors.

Current Status and Timeline

The IRB approval process is currently underway with anticipated approval this summer. The 360-degree footage of the speakers and BLM protest are completed, however, the footage

must be uploaded to Unity$^®$ game engine to be compatible with the specialized HP Reverb G2

HMDs. The university laboratory is equipped with five HP Reverb G2 HMDs, multiple PC

stations, and the equipment needed to capture heart rate, skin conductance, and eye-tracking. We

anticipate to begin data collection in the early fall and continue until N is reached. The required

December 2022 interim report will include analyses of data in-progress with expectations to

complete data collection by April 2023. All data will be analyzed and written into a final

manuscript ready for publication and presented at the 2023 Annual AEJMC Conference.

Anticipated Outcomes

To assess the two competing theories, the main and interaction effects of the experimental

treatment (Race: Black vs white; Immersion: low vs. high) will be tested using a 2-way Analyses

of Variances on prosocial behaviors. The PROCESS macro (Hayes, 2017; Model 7) for SPSS

will be used to test for underlying mechanisms that drive building a shared reality between

audiences and the featured speaker via media perceptions (i.e., social presence, spatial presence)

and speaker perceptions (i.e., likability, trustworthiness). A multiple linear regression will be

used to test likability, trustworthiness, social presence, spatial presence, and shared reality as

predictors of willingness to support and disseminate antiracist messaging. Lastly, multilevel

modeling will test the repeated measurements over time captured by the heart rate, eye-tracking,

and skin conductance indices.

Anticipated outcomes will inform journalism and mass communication research about

Whiteness and immersion's role in creating a shared reality relating to antiracist worldviews on

non-student populations. Expected results could also provide evidence of how virtual

environments can promote support for organizations like Black Lives Matter and highlight the

processes necessary for amplifying suppressed voices within excluded communities more

generally.

Potential publication venues for the finished project

- Journalism & Mass Communication Quarterly (JCMQ)
- Journalism & Communication Monographs (JCM)
- Human Communication Research (HCR)
- Communication Monographs

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Anticipated Budget

The anticipated budget (Table 1) will cover costs for advertising participant recruitment and participants' compensation. Accessing non-student participants requires additional funding and the AEJMC Collaborative Scholar Grant will greatly enhance the achievability of this student-led study. The collaborative faculty scholar anticipates matching the awarded grant amount and any remaining fees will be covered by the department.

Table 1

Proposed budget details

Budget Items	Number of Items	Cost per Item	Total Cost	Notes
Advertising for recruitment (printing fees, travel, etc.)	1	$100	$100	Based on university B&W printing costs ($0.07), travel within 30 miles
Participant Compensation	200	$40	$8,000	$30 VISA gift cards and $10 for parking/travel
Total			**$8,100**	