

EXTENDED ABSTRACT: THE BAG STANDS ALONE

This experimental study attempts to determine if priming pre-existing stereotypes affects the ways that people process and recall information in virtual reality environments (VE), and whether this also affects related judgments. A number of studies have found that if existing stereotypes are primed by exposure to stereotype-consistent media content, people's assessments and judgments of subsequent events and individuals tends to be consistent with the media prime (see Molden, 2014; Roskos-Ewoldsen, Roskos-Ewoldsen and Carpentier, 2009). This may be particularly important in examining the ways that people process VEs.

Because of the interactive and immersive nature of VEs, users have far greater control over their ability to select and attend to specific features or characteristics in the environment than they would in other media formats. This study uses VEs to identify the extent to which cuing stereotypes of terrorism, or of sympathy for fleeing refugees, influences attention, interpretation, and memory for an ambiguous scenario in an airport terminal. We will also attempt to determine whether these factors impact generalized attitudes towards immigration and about Muslims.

We expect that preexisting attitudes toward immigration and Muslims will mediate the priming effects of audio cues and affect the attention to, and recognition and memory for, content that is consistent with existing cognitive biases.

Method

Participants and Procedures

This study is part of a larger study using a 3 X 2 multifactorial design with between-subjects factors of priming condition (Terrorism, Refugees Prime, and Neutral Prime) and the within-subjects factors of order of presentation. The VEs were developed using Unity tools.

Different audio tracks were created for each priming condition. Participants will also be exposed to a second VE experience unrelated to the focus of this part of the study.

Participants (N=100) are undergraduate communications students at a private university and are receiving extra credit as compensation. After signing a consent form, participants will be randomly assigned to one of the experimental conditions. Participants will be informed that the study examines responses to VEs and receive instruction regarding the process of the experiment. Data collection will take place in a secured lab space on university property and will be recorded using survey software, digital audio recording software and screen recording software. Participants will use an Oculus Rift to experience the VEs.

Participants will first be asked to use a PC to complete a series of questions regarding demographics, prior experience with VEs, their perceptions of virtual reality environments, and a series of questions concerning immigration, terrorism, and Muslims using an online survey created using Qualtrics. After experiencing and evaluating the VEs, participants will be asked again to rate their responses to the questions concerning immigration, terrorism and Muslims. Each participant will then view three VE experiences. After each experience, they will be asked to provide a verbal, recorded description of the events that occurred and to respond to a series of questions that seek to assess their recognition of the VE as well as their sense of presence, arousal, and emotional responses to the VEs following each of the three experiences. Two researchers will be present for each participant and will be responsible for assisting the participant with proper wearing of the Oculus headset and when prompted by the participant, executing the next VE. The experiment should take less than one hour. All stages of the experiment have been approved by a university Institutional Review Board.

Virtual Experience Scenarios

Participants first view a foil scene in order to orient them to navigating within a VE. The foil “The Night Café” depicts persons in a café that is designed to resemble the art of Vincent Van Gogh; the audio is instrumental classical music. Participants will have three minutes to maneuver through the experience allowing them to familiarize themselves with how to move within the VE and properly use the controller. Additionally, this foil provides a baseline for recognition and emotional responses in a neutral environment that includes people.

The VE scenario takes place within an airport terminal waiting area occupied by four male passengers: one Caucasian, one Black, one Asian, and one Muslim wearing a traditional keffiyeh. In the scenario, the four men are seen standing and waiting in separate areas of the space. During the scene, the men leave the waiting area separately in a staggered fashion. When all of the men have left the scene a security officer discovers a piece of baggage is left unattended. The audio track in all three experiences (terrorism, refugee, neutral) culminates in the security officer reporting that an unattended bag has been found, followed by police scanner radio chatter. Upon completion of the experience, participants are asked to recall which of the four men was the owner of the unattended bag. The correct answer is that none of the men in the scene are identified as the owner of the unattended bag. The bag was in the scene and unattended for the duration of the VE.

Each prime scenario has unique audio cues. All primes provide general airport background sounds such as boarding announcements, plane engines and footsteps of passengers walking in the airport. The “Refugee” prime provides positive cues regarding refugees via overhead announcement news reports about a rescued Syrian child. The “Terrorism” audio includes an overhead news reports about undetected terrorists entering the country. The “Neutral” audio includes the daily weather report in addition to the background sounds.

Measures of Evaluation

Demographic questions include political preferences in addition to general age, gender and education inquiries. To assess participants' attitudes toward immigrants, participants are asked to select the degree to which they agree or disagree with statements such as "I think the proportion of immigrants in the United States is too high." This is a seven-point scale where one describes "strongly disagree" and seven "strongly agree." Scales were adapted from preexisting research by Watson and Riffe (2012). The same scale was adapted to assess participants' attitudes toward Muslims and asks participants to select the degree to which they agreed or disagreed with statements that assign adjectives (Slade, 1981) to perceptions of Muslims such as: "I believe most Muslims are dishonest." To assess attitudes toward terrorism the scale was adapted again to assess the extent to which participants agreed or disagreed with statements such as: "I believe that I am at risk of being attacked by terrorists." Finally, participants' levels of feelings of anxiety, fear and anger concerning terrorism were assessed using a seven-point scale ranging from Not at All to Extremely.

Recognition and memory will be assessed first by asking participant to describe the VE. The initial request will then be followed by asking them to recall the people, events, and setting. Free recall will be recorded using an audio recorder and later transcribed for analysis and coding. Participants will then complete a series of multiple-choice cued recognition tests assessing memory for the content of the VE. recorded via audio recording and a recognition test administered following each VE experience.

Data Collection and Analysis

Data collection for this study is underway and initial analyses have been conducted. Data collection is due to be completed by March 2018. Planned analysis will be engaged to identify

trends and/or patterns as well as multivariate analysis of variance (MANOVA) will be used to test for differences between conditions. Hierarchical regression will be engaged to assess the mediating effect of attitudes as relevant to the research questions.

Works Cited

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