

A Research Proposal

Social Influence in Virtual Spaces: Social Proof Versus Authority Power

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Abstract

The proposed research aims to explore the influences of authority power and social proof while considering personality characteristics in a post-pandemic virtual environment. This study will be conducted online as a conceptual replication of a recent experimental study (Danay et al., 2016) that was conducted in person and compared social influence strategies drawn from two of psychology's most classic studies. This replication will include several personality factors. Scripts, language, inflection, and tone will imitate the classic Milgram experiments of the 1960s to display authority power, while a virtual version of the classic Asch line study will mimic social proof (Asch, 1955; Milgram, 1963). Participants will choose between Milgram's authoritative commands and Asch's intense social pressure. Prior to entering the live experiment participants will complete the Big 5 Inventory (BFI; McCrae & Costa, 2003), Locus of Control Scale (LCS; Rotter, 1966), and Adult Attachment Questionnaire (Simpson, et al., 1996). The two social forces (authority vs. social pressure) will be compared during the proposed study. The hypotheses posed are as follows: H1) It is expected that a majority of participants will be influenced by social proof rather than authority. H2) Agreeableness and openness will negatively correlate with authority and positively correlate with social proof. H3) External locus of control will positively correlate with authority. H4) Individuals with an avoidant attachment style will adhere to authority while anxiously attached individuals will follow social proof. This research may provide insight into forces that influence an individual's judgment in a virtual environment.

Keywords: pandemic, social proof, conformity, authority, personality

The 2020 global pandemic dramatically shifted how humans interact. Millions shifted their everyday life to a virtual environment; schools, workplaces, and family get-togethers all moved behind computer screens. Although this virtual shift undoubtedly decreased the spread of COVID-19, did it impact different social influences? Two classic experiments attempted to measure the strength of different social influences. Asch examined the

power of conformity and social pressure in the 1950s, while in the late 1960s Milgram measured obedience and authority power. A recent study (Danay et al., 2016) attempted to pit those two social forces against one another to see which would prevail. That experiment used the harsh authoritative language of Milgram's obedience experiments and the anxiety-inducing social pressure of the Asch line study. The results were an even split,

with 50% of participants more influenced by authority power and the other half more influenced by social pressure. This finding suggests that in face-to-face situations, social proof and authority have equivalent influence. However, the Danay et al. (2016) experiment was conducted in person. Some research found that it is possible for social forces to fluctuate in diverse situations, including an online environment. One study conducted using an online format found a weak but significant negative correlation between the trait openness on the Big 5 personality measure and disinhibition, suggesting not only a behavioral difference in virtual settings, but that personality is a contributing factor (D'Agata & Kwantes, 2020). Another study found that personality and other noncognitive factors such as locus of control can also affect behavior and decision-making (Mihaela, 2015).

The study proposed here will explore the possible influences of personality factors such as locus of control on compliance to social forces when participants serve in a virtual environment. The Big 5 five-factor model of personality and the Locus of Control Scale are measures that have been used in previous research to explain differing behavior between an in-person and virtual environment. Still, there is a possibility that an individual's behavioral differences may also be affected by their style of attachment. Attachment style has been shown to link to an increased likelihood of authoritarian and authoritative behavior, possibly showing a relationship between attachment and the influence of authority power (Roccatto, 2008). This combination of personality measures may influence the predictability of an individual's adherence to one social force over another. In summary, the proposed study is a conceptual replication of Danay et al. (2016) with the addition of several personality measures. The recent shift to an almost exclusive online environment as a consequence of the pandemic may have affected the relative influence between authority and social proof. It is believed that recreating this study in an online environment may identify changes in social influence and various

personality dimensions will be found to moderate which force will be dominant.

This research imposes six hypotheses. First, it is expected that the majority of participants will be influenced by social proof. Second, it is expected there will be a negative relationship between authority power and a positive relationship between social proof and openness to experience. Third, it is expected that there will be a positive relationship between social proof and agreeableness. Next, it is expected that there will be a positive relationship between authority power and an avoidant attachment style. Fifth, it is expected that there will be a positive relationship between social proof and an anxious attachment style. Lastly, it is expected that there will be a positive relationship between social proof and an external locus of control.

Method

Participants

Participants will be introductory psychology students recruited from a southern California community college. IRB approval will be acquired from the college's Institutional Review Board. Participants will be informed of the study through an email announcement distributed by the psychology department's professors. Some professors may offer course credit as an incentive. The SONA system, a data collection, management, and storage system, will be used as a survey platform. Informed consent will be provided at the start of the survey and all participants will be required to read and opt-in before gaining access to the study. Within the informed consent message, participants will be made aware that there will be no risk to them during this study and they will be free to withdraw at any time without any penalty.

Measures

Demographics Participants' sex, age, and ethnicity will be measured using open-ended text boxes.

Personality Agreeableness and Openness to experience will be measured using The Big 5 Inventory, a 44-item self-report measure that uses a 7-point Likert-type scale (BFI; McCrae & Costa, 2003). Participants make their ratings using a 7-point scale

(1 = *totally disagree*; 7 = *totally agree*), with high scores in both subscales reflecting stronger traits.

Locus of Control Locus of control is measured using the Locus of Control Scale, a 29-item self-report measure (LCS; Rotter, 1966). The LCS assesses both internal and external locus of control, with high scores indicating an external locus of control and low scores indicating an internal locus of control. Each question asks participants to select one of two options (“yes” or “no”) that best align with their beliefs.

Attachment Anxious and avoidant attachment styles will be measured using the Adult Attachment Questionnaire, a 17-item self-report measure; only the Anxious and Avoidant subscales will be used (Simpson, et al., 1996). Participants provide their ratings using a 7-point scale (1 = *totally disagree*; 7 = *totally agree*), with high scores on both subscales reflecting a higher attachment style.

Procedure

Participant appointments will be available every 30 minutes from 9:00 a.m. to 6:00 p.m. seven days a week from October 27th to December 15th. Participants will use a Zoom link at the scheduled appointment time to connect to the live meeting.

Trial Sequence

The trial sequence for each participant will be as follows. Upon admission, participants will be met with three students in plain clothing and one authoritative male wearing glasses and a lab coat who will instruct them to turn their camera and microphone on. The man in the lab coat (the authority figure) will act mildly frustrated and say, “Hello. Thank you for coming. I’d like to talk to you in a break-out room. Hold on one moment.” Then a break-out room is created, and the authority figure and the participant only are sent to that room.

Once in the break-out room, the authority figure says,

“Okay, again, thank you for coming. I have a problem, and I hope you can help. One of my confederates had to drop out of the study today, so if you’re alright with it, I’d like you to act as a confederate rather than a participant. You will get the

exact same participation credit, so there is nothing for you to worry about. All those other people who were in the Zoom are actually on my research team. They are all confederates following a script. I’ve already trained them, so I just need to give you a quick training too. I need you to follow a script. It’s really simple. I have another person coming into the meeting in a moment who will be our real research participant. We’re going to try to get them to conform to incorrect information given to them by the rest of the group. So, once we’re all set up, what will happen is that I will show everyone a series of lines of different lengths. I will then ask everyone to tell me which of the Comparison Lines matches the Standard Line, and then we’ll go around the group and give answers. But you’re not going to give the real answers, but what I’ve scripted for you. Your answers are right here on this card.”

The authority figure then shows a note card with the scripted answers for the participant. It says, “1. A, 2. B, 3.A” on it. The authority figure then continues,

“For question 1, you answer A. For 2, you answer B, and for 3, you answer A. I’ll even copy and paste this into a private chat just for you so you can remember. That’s it. Your orders are very easy, but it’s extremely important that you follow this script. These are the answers you must give. The study requires it. Don’t go with what you see on the screen. Always go with these instructions. Do you understand?”

Once the participant confirms that they understand, the authority figure directs them both back to the main room.

Upon returning to the main Zoom room, the participant will see that the four people are still in the room, but now a fifth has joined the meeting. The authority figure now assigns each person a seat number. The three original meeting members are assigned Seats 1, 2, and 3. They are directed to change their screen names to Seat 1, Seat 2, and Seat 3. The participant is asked to change their screen name to Seat 4, and the last person to enter

the meeting is asked to change their screen name to Seat 5. Once all names have been adjusted, the study proceeds. The authority figure now shares his screen, and all members can see a slide that says, “Welcome! THANK YOU for agreeing to participate in this study!” The authority figure advances to the next slide and reads the written instructions on it, which says,

“Instructions: In a moment, you will see a series of slides featuring a standard line and three comparison lines labeled A, B, or C. Your task is to identify which comparison line best matches the standard line. Please leave your camera on and yourself unmuted for the length of the study.”

The authority figure then advances to the first of three slides with line comparisons similar to what was seen in the classic conformity studies conducted by Solomon Asch (Asch, 1955). The authority figure repeats the instruction, “Please identify which of the comparison lines matches the standard line. Seat 1?” The correct answer to the question is Line A. The person identified as Seat 1 (a confederate) says “Line A”. Seats 2 and 3 (both confederates) in order also answer, “Line A”. Now, the authority figure asks the true participant in Seat 4 (who thinks they are a confederate) what they see. Whether they are following the orders of the authority figure’s script (which says A), following the lead of the other supposed confederates, or actually answering what is the correct match on the screen, they should answer “Line A”. (If the participant fails to answer, “Line A”, the study will be discontinued at this point.) The person in Seat 6 (who the participant thinks is the real participant but is actually another confederate) finishes the trial by also answering “Line A”.

The authority figure then advances to the next slide with the second set of lines. For this trial, the correct answer is B. The procedure is repeated with Seat 1 through Seat 3 being asked in order what they see, and all of their answers are “Line B”. When Seat 4 is asked, their script says, “Line B,” all of the confederates have answered “Line B,” and the correct match is Line B. They should

answer “Line B”. Again if they fail to do this, the study will be discontinued immediately.

Finally, the authority figure advances to the final slide with the third set of lines. The factually correct match for Trial 3 is Line C. The procedure is followed one more time, and when Seat 1 is asked for their answer, they respond, “Line B”. The people in Seats 2 and 3 also answer “Line B”. Seat 4, the true participant, is then asked for their response. This is the primary dependent variable data that will be collected. There are three choices they have in deciding how to act. They could follow the orders of the authority figure and look to the script (authority power), which tells them to answer, “Line A”. Or they could follow the confederates’ lead, essentially doing what everyone else was doing (social proof), and answer “Line B”, or, lastly, they could look at the slide and reply with the factually correct answer on the screen, which is “Line C”.

After the participant answers, their response will be recorded, they will be thanked for their participation, and then provided a detailed verbal debriefing in which they are informed of the deception used. The participant will also be asked, “On a scale of 1 to 7, how familiar are you with the Asch Line Study on conformity conducted in the 1950s by Solomon Asch?” and “On a scale of 1 to 7, how familiar are you with the Obedience to Authority Studies conducted in the 1960s by Stanley Milgram?” (1 = *completely unfamiliar*; 7 = *thoroughly familiar*). The participants’ rating is recorded, and they are provided a digital copy of the debriefing before exiting the Zoom session.

Results

Here we will present statistical data. We will begin with a table summarizing statistical data (N , M , SD , coefficient Alpha) for all the scales (Attachment Style, the two Big Five scales, and Locus of Control). We will then describe the statistical tests conducted to test our hypotheses and the findings. We will present one or more tables and figures, but only if they are needed to help make the findings clearer.

Discussion

The Discussion narrative will progress as follows. Which, if any of the hypotheses were supported? How did the findings of this study relate to prior research in this area mentioned? All prior studies mentioned will include APA-style citations and appear in the reference section. Next, limitations to the current study will be described. The paper will conclude with suggestions for further research in this area.

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