Replication of Blankenship and Wegener (2008, JPSP, Study 5A)

Introduction

Across eight studies, Blankenship and Wegener demonstrated that focusing on important values leads to increased message processing, which in turn leads to greater persuasion as well as greater resistance to counter-persuasive attacks. The present study is an attempt to replicate Study 5A from this paper. In Study 5A, participants read persuasive essays arguing that a fictitious country (Tashkentistan) should be admitted to the European Union (EU). Essays were manipulated to include either strong arguments in favor of the proposal (e.g., admission would be highly mutually beneficial to the country and the EU), or weak arguments (e.g., admission would be modestly beneficial to the country with little benefit to the EU). After reading the essay, participants identified passages within the proposal that focused on either normatively important values (e.g., freedom) or less important values (e.g., wealth). Participants then rated their attitude about Tashkentistan entering the EU and indicated the extent to which they felt personally involved with the issue.[1]

As predicted, participants who focused on important values in the messages were more persuaded by strong than weak arguments, whereas participants who focused on unimportant values were insensitive to argument quality, as indicated by a significant interaction of value importance and argument quality on attitudes. In addition, participants who focused on important values indicated greater involvement with the issue than those who focused on unimportant values. Issue involvement mediated the interaction of argument quality and value importance on attitudes, providing evidence that value importance effects on persuasion can be explained by variation in issue involvement. The present study will focus on replicating the key interaction of value importance x argument quality on attitudes.

Method

Power Analysis

In the original study, the observed effect size for the key value importance x argument quality interaction was *partial* η^2 = .042, or f = .2119. Power analysis using G*Power 3.1 software (Faul, Erdfelder, Buchner, & Lang, 2009) indicated that a total sample size of N = 177 would be necessary to achieve power = .80 to replicate this interaction. Power of .90 could be achieved with a sample of N = 236, and power of .95 could be achieved with a sample of N = 292.

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[1] Following protocol from the Reproducibility Project, Study 5b was the first study considered for replication. In consultation with the first author of the original study, Study 5a was selected for replication rather than Study 5b. Study 5b involved reading persuasive messages in favor of building a nuclear power plant in Canada. The persuasive messages in the original study were written prior to the Fukushima Diichi nuclear power plant disaster of March, 2011. The messages noted safety concerns about nuclear power plants that were relevant prior to 2012 but seemed out of place following so closely after the Fukushima disaster. The researchers had similar concerns about the relevance of persuasive messages in Study 5a regarding the admission of a fictitious country into the EU in 2012, but decided that participants were more likely to be familiar with and influenced by the nuclear disaster in Japan than with the economic situation in the European Union.

Planned Sample

Consistent with the original study, participants will be drawn from the undergraduate research participant pool. Demographic characteristics of the participants were not provided in the original article, but based on current distributions of the undergraduate populations it is anticipated that the current sample will be similar to the original sample in terms of age, gender, and race/ethnicity. Participants will receive partial course credit. Given constraints of participant pool availability, a sample of $N = 236$ to achieve .90 power is planned for the present study.

Materials

The current study will use materials identical to those used in the original study (as provided by the original authors), with trivial modifications to the instructions to make references to the original university consistent with the current university. Participants will read one-page persuasive essays arguing in favor of the admission of a fictitious country (Tashkentistan) into the European Union. The persuasive essays will vary along two dimensions: value importance and argument quality, resulting in a 2 x 2 design. Based on normative ratings reported in the original article, important values will be self-respect, loyalty, and freedom. Values identified as less important are wealth, social power, and unity. Each message contains three arguments that are either "relatively cogent and compelling or relatively weak and specious in their support of Taskentistan's admittance into the EU" (p. 199).

Procedure

Consistent with the original study, participants will complete measures on paper in small groups. After providing consent to participate, participants will be randomly assigned to receive one of four packets of materials.

The procedure of the original study will be followed exactly. As described in the original article, "First, participants received a booklet presenting a written message containing either strong or weak arguments arguing that a fictitious country, Tashkentistan, should be allowed to join the European Union (EU). After viewing the message for the first time, participants were asked to engage in a 'speech interpretation task.' Participants read three 3- to 4- sentence excerpts (paragraphs) from the message, each listed separately on a page along with an 'idea' (i.e., a value). The value had been identified in pretests as normatively important or unimportant. Each message paragraph was created such that some elements were related to both the important and the unimportant values that were associated (in different conditions) with the excerpt. For each excerpt, participants were asked to circle the value and to circle a keyword in the excerpt that was most related to the value, connecting the two circled words by drawing a line between them" (p. 198). "After the speech interpretation task, participants were asked to report their attitudes toward the topic and to rate how important the issue was to them. Finally, participants were debriefed and dismissed" (p. 208).

Analysis Plan

The analysis will be conducted in parallel with the original study. The key interaction of value importance (important vs. unimportant) x argument quality (strong vs. weak) on attitude will be tested using a 2 x 2 ANOVA in SPSS.

In addition to testing the replicability of the key finding, I plan to run analyses that parallel the other analyses reported in the original paper, including a 2 x 2 value importance by

argument quality ANOVA to test the main effect of value importance on issue involvement, and a multiple regression to determine whether issue involvement mediates the value importance x argument quality interaction effect on attitude.

Differences from Original Study

One important difference is that data for the original study were collected in the mid-2000s, when the European economy was strong and entry into the EU was a reasonable goal for small countries. Data for the replication will be collected in 2012, when the European economy is in recession and the stability of EU is threatened by potential bankruptcies of member countries. Participants who are knowledgeable about the current economic climate in Europe may think that it is odd that a small country would petition to join the EU at a time when its economy is faltering.

(Post Data Collection) Methods Addendum

Actual Sample

As planned, data collection was terminated on the day that the 236th participant was scheduled to complete the study. Data from additional participants scheduled on that day were included, resulting in a total sample of 259 participants. All surveys from one session (N = 5) were removed prior to data entry because a participant stood up during the session and announced loudly, "Tashkentistan is obviously a fictitious country!" One survey was removed because the participant failed to complete the speech interpretation task as instructed. Another survey was removed because the participant answered only one of 10 questions. A final survey was removed because the experimenter noticed that the participant had completed this survey in a prior session and the participant acknowledged that this was the case. Removing surveys from these eight participants resulted in a final usable sample of 251. Given the effect size observed in the original study, the expected power for this sample was .92.

Differences from pre-data collection methods plan

Data collection followed the pre-data collection methods plan for the primary study, with one addition. During the time period that data were collected, frequent news reports announced the increasingly dire economic situation in several European Union countries. Due to concerns that these news reports might bias responses, participants completed an additional three questions to assess their awareness of the economic situation in the EU. This supplementary survey was given to participants after they had handed in the primary study materials so that it could not influence responses on the primary dependent measures. Participants responded to the question: "To what extent have you been following recent news regarding the European economy?" on a scale from 1 (*not at all*) to 9 (*a lot*). They were asked, "How aware are you of the current economic situation in the European Union?" on a scale from 1 (*not at all aware*) to 9 (*very aware*), and they were asked, "How would you rate the current economic climate in the European Union?" on a scale from 1 (*very weak*) to 9 (*very strong*). In addition, as an indirect measure of whether participants were aware that Tashkentistan is a fictitious country, they were asked "how aware are you of the current economic situation in Tashkentistan?" on a scale from 1 (*not at all aware*) to 9 (*very aware*).

Results

Data preparation

Following Blankenship and Wegener (2008), scales for attitude and issue involvement were computed by averaging responses to the relevant scale questions. Across the entire sample, reliability for the six-item attitude scale was $\alpha = .93$, similar to the reliability observed in the original study ($\alpha = .88$). Reliability for the four-item issue involvement scale was $\alpha = .70$, which is slightly lower than that observed in the original study ($\alpha = .78$).

Confirmatory analysis

Blankenship and Wegener (2008) observed that the impact of argument quality was stronger when participants were considering important values rather than unimportant values. This key interaction was tested using a 2 (value importance: important vs. unimportant) x 2 (argument quality: strong vs. weak) ANOVA with attitude scores as the dependent variable. In contrast to the original study, the interaction between value importance and argument quality was not significant, $F(1,247) = .49$, $p = .49$, partial $\eta^2 = .002$, thus the key finding in the original study was not replicated in the present sample. As in the original study, the main effect of argument quality was significant, $F(1,247) = 13.01$, $p < .001$, partial $\eta^2 = .05$, such that participants who read strong arguments in favor of admitting Tashkentistan to the EU reported more favorable attitudes ($M = 6.84$, $SD = 1.41$) than participants who read weak arguments ($M = 6.21$, $SD = 1.34$). Similarly, as in the original article, the main effect of value importance was not significant, $F(1,247) = .20$, $p = .66$, partial $\eta^2 = .001$.

Exploratory analyses

In addition to testing effects on attitude, Blankenship and Wegener also tested the effect of value importance and argument quality on issue involvement, using a 2 x 2 ANOVA. They predicted and found a significant main effect of value importance on issue involvement, such that people who considered important values reported feeling more involved with the issue of whether Tashkentistan should be admitted to the EU compared to people who considered unimportant values; the main effect of argument of argument quality and the argument quality x value importance were not significant. In the present study, the same 2 x 2 ANOVA did not replicate the significant main effect of value importance, $F(1,247) = .085$, $p = .77$, partial $\eta^2 = .000$. However, there was a significant main effect of argument quality, $F(1,247) = 6.13$, $p = .014$, partial $\eta^2 = .024$, such that people who read strong arguments reported feeling more involved with the issue compared to people who read weak arguments. The interaction was not significant.

Because the key interaction of value importance and argument quality on attitude was not observed, and because value importance was not related to issue involvement, follow-up analyses to test whether issue involvement mediates the value importance by argument quality on attitude were not conducted.

Examination of supplementary questions revealed substantial variability in participants' reported awareness of the economic situation in the EU. Nearly half of participants (45%) responded "not at all" when asked how much they followed news regarding the European economy, and 35% said they were "not at all aware" of the current economic situation the EU. Participant ratings of the current economic climate in the EU were approximately normally distributed and ranged from 1 to 8 on the 9-point scale. Interestingly, 22% of participants

reported having some awareness of the current economic situation in Tashkentistan, possibly because of the leading question that was used to assess awareness.   However, responses on these questions did not moderate the effects of value importance, argument quality, or their interaction on attitude or issue involvement. Participants reporting a high degree of awareness of the EU economy showed the same pattern of responses as those reporting a low degree of awareness. Similarly, including the awareness questions as covariates in the value importance x argument quality ANOVAs did not change the overall pattern of means or the significance level of any reported effect.

Discussion

Summary of Replication Attempt

The main effect of argument quality on attitude was replicated, indicating that strong arguments were more effective than weak arguments in persuading participants that Tashkentistan should be admitted to the EU. However, the key interaction of value importance by argument quality was not replicated; participants were equally sensitive to strong versus weak arguments regardless of whether they were assigned to consider normatively important or unimportant values. Because the interaction is the primary finding of the original paper, this is ultimately an unsuccessful replication.

Commentary

It appears that the value importance manipulation was not effective in the present sample. In the original study, the researchers used a pre-test to identify values that were normatively important or unimportant to a sample of participants similar to the sample used in the main experiment. The effectiveness of this manipulation in the original study was supported by the finding that participants who considered important values reported significantly higher involvement with the issue compared to participants who considered unimportant values. In the present study, there was no difference in issue involvement between participants who considered important versus unimportant values. It may be the case that participants in the present sample did not feel that self-respect, loyalty, and freedom are more important values than wealth, social power, and unity. If participants do not see these values as differentially important, then there is no reason why values would moderate the effect of argument quality on attitude. Unfortunately, the perceived importance of the value words was not directly tested in the present sample so it is not possible to say whether the values were perceived as important or unimportant.

The difference in value importance between the original study and the present replication may be a function of the different time periods in which the two studies were conducted. In the original study, conducted in the mid-2000s when the US economy was strong, "wealth" was identified as a normatively unimportant value. In 2012, with the US economy struggling out of a deep recession, "wealth" may be seen as a more important value. Also, when the original study was conducted, the European economy was strong and a small country petitioning to join the EU would have seemed very reasonable. When the replication was conducted in 2012, the EU was going through a major economic crisis with some member countries on the brink of default. To a person familiar with these events, it might seem unreasonable to think that any country would petition to join this faltering union. This difference between the original study and the current replication may explain the failure to replicate, although it is not certain. Self-reported awareness of the current economic climate in the EU did not moderate the effects of the value

importance, argument quality, or their interaction, so it is possible that the differences in the EU economy between the two studies do not explain why the effects were so different.

Reference

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods, 41*, 1149-1160.