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How Education Did (and Did Not) Accentuate Partisan Differences During the Ebola Outbreak of 2014-15

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Abstract

Education exacerbates partisan gaps in scientific knowledge and attitudes. However, previous findings about the extent and symmetry of this moderation have been mixed. As a conceptual replication of previous research, this study examines whether education asymmetrically moderates the Democrat-Republican gap in attitudes about Ebola virus disease (EVD) and policies to combat EVD. Weighted data from a survey of 1,461 non-institutionalized adults drawn from a probability-based panel were collected during the 2015 EVD epidemic. The survey measured seven attitudes: fear of personal infection, estimated severity of Ebola, suspicion of exposed Africans, suspicion of exposed Americans, Western government preparedness, support for low-intensity interventions, and support for high-intensity interventions. Knowledge about EVD was also measured. As in prior studies, highly educated Democrats uniquely diverged from other respondents in some attitudes. However, in the other attitudes, there were main party and education effects but no evidence that education was a moderator of partisan differences. Overall, education moderated partisanship when attitudes were affect-laden and targeted toward immediate threats, but not when attitudes were policy-oriented.

Keywords: partisanship, framing, emotions, motivated reasoning

Non-Technical Summary

Background
Research suggests that highly educated left- and right-wing citizens are more politically polarized from one another than their less educated counterparts. In the U.S., attitudes toward climate change match this pattern—college-educated Republicans (right-wing) and Democrats (left-wing) have uniquely strong right- and left-leaning attitudes toward climate change. However, little research has been done on non-environmental topics to confirm that this effect is robust. In addition, previous research is unclear about whether the effect of education is stronger among Democrats or equally strong among Republicans and Democrats.

Why was this study done?
I conducted this study to examine whether the polarizing effect of education, found in earlier studies on climate change, could be replicated on a non-environmental topic. The West African Ebola epidemic of 2014-15 was the non-environmental topic that I examined. This epidemic was politicized by the Republican party in 2014. I also sought to examine whether there was an asymmetrical effect, with a strong contrast on the Democratic (left-wing) side between highly educated and less educated citizens, but a weak contrast on the Republican side between highly educated and less educated citizens.

What did the researchers do and find?
I analyzed data from a survey of 1,461 U.S. residents, gathered during the West African Ebola epidemic. This survey measured seven attitudes: fear of Ebola infection, estimated severity of Ebola, suspicion toward exposed Africans,

suspicion toward exposed Americans, estimated Western preparedness for future outbreaks, support for low-intensity interventions and support for high-intensity interventions. The survey also measured knowledge about Ebola. Highly educated Democrats uniquely diverged from less educated Democrats in three attitudes: fear of infection (slightly), suspicion of Africans, and suspicion of Americans—they were less fearful and less suspicious than other subgroups. This was an asymmetrical effect. I found no evidence of an equal and opposite effect on the Republican side. In other attitudes and knowledge, there was little evidence of an interaction between party identification and education.

What do these findings mean?
These findings challenge the idea that education moves both left- and right-wing citizens in opposite directions. The findings suggest that, in some situations, there is a marked contrast between highly educated and less educated Democrats, but not between highly educated and less educated Republicans. (Some prior research reached similar conclusions.) My findings also suggest that polarization through education may be most likely to occur in targeted attitudes, such as suspicion toward persons, but not in attitudes toward policy.

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Polarization exists in the U.S. between Democrats, who tend to be liberal, and Republicans, who tend to be conservative (Thurber & Yoshinaka, 2015). Recent scholarship suggests that education accentuates polarization in the United States: highly educated Democrats and Republicans are farther apart on political attitudes and scientific knowledge than less educated Democrats and Republicans (Joslyn & Sylvester, 2019; Newport & Dugan, 2015; Nisbet & Markowitz, 2014). However, findings on this issue have not been uniform, with most studies reporting an asymmetric partisan effect and a few studies reporting a symmetric partisan effect (e.g., Hamilton, Hartter, & Saito, 2015; Hochschild & Einstein, 2015). In addition, most studies have focused exclusively on environmental topics to the exclusion of other issues. In this article, I conduct a conceptual replication of previous studies by examining attitudes related to the Ebola epidemic of 2014-15 to determine whether education accentuates partisan differences in the U.S., and whether the moderating effect of education is symmetric or asymmetric.

The largest Ebola virus disease (EVD) epidemic in history occurred in 2014–15, causing at least 11,000 deaths, primarily in Guinea, Liberia, and Sierra Leone (WHO Ebola Response Team, 2014). During this epidemic, Ebola became a salient political topic in American discourse (McCarthy, 2014). Mass media coverage of the EVD epidemic rose markedly after the first U.S case was documented, and this coverage exposed the American public to both information and speculation (Towers et al., 2015). By November 2014, the average American ranked Ebola as the third most urgent health problem facing the country (Jones & Saad, 2014), and a substantial portion of the public expressed concern about the spread of Ebola to the U.S. and the possibility of being personally infected (McCarthy, 2014).

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The politicized nature of the discourse was evident from the increasing number of news stories about the epidemic before the midterm elections in November 2014 and the sharp decline thereafter (Gertz & Savillo, 2014; Greer & Singer, 2017). There was a steeper increase in the frequency of such stories on Fox News, a conservative outlet, relative to MSNBC, a liberal outlet. Moreover, both Fox News correspondents and Republican elites explicitly connected Ebola to the issue of U.S.-Mexico border crossings in order to suggest that the Obama administration's immigration policy had placed U.S. residents at risk (Greer & Singer, 2017). Additionally, Republicans were more fearful than Democrats of being misinformed or under-informed due to untrustworthy news coverage (Pew Research Center, 2014).

Polarization and Education

Under the circumstances described above, a partisan gap in attitudes toward Ebola could have developed, and it could have been accentuated among highly educated citizens. One cause of accentuation—the political explanation—is framing. Political elites use frames to guide the interpretation of news, and college-educated adults receive greater exposure to these frames due to greater media consumption and political engagement (Zaller, 1992). Distinct cues from Republican and Democratic elites cause contrasting attitudes and "facts" among citizens whose party identification is Republican or Democratic. Such effects can be self-reinforcing, leading citizens to more closely attend to cues from congruent party elites (Feldman, Myers, Hmielowski, & Leiserowitz, 2014). Greater political engagement among college-educated adults stems from two sources: education itself, which promotes interest in politics, and the socioeconomic status that ensues from educational attainment, which supplies the skill and wealth that enable successful engagement (Brady, Verba, & Schlozman, 1995; Saunders & Abramowitz, 2004).

The psychological explanation for this effect of education is grounded in the idea that people unconsciously contrive and articulate post hoc rationales for political and moral conclusions that they have already reached (Haidt, 2001; Taber & Lodge, 2006). Some rationalization toward a preferred conclusion occurs quickly and unconsciously through System 1 processing (Haidt, 2001), but some also occurs through effortful and conscious processing in System 2 (Kahan, Landrum, Carpenter, Helft, & Hall Jamieson, 2017). There is a stronger tendency to selectively extract information related to gun control, climate change, and other contentious topics in ways that bolster a rationale for one's preferred inference (Hamilton, Cutler, & Schaefer, 2012; Kahan, Peters, et al., 2017; Kahan et al., 2012). Kahan and colleagues have termed this dynamic "Motivated System 2 Reasoning" (Kahan, Landrum, et al., 2017), a label that indicates the stimuli in Kahan's experiments require effortful cognition rather than automatic cognition. Even though all people have the capacity for motivated processing, highly educated people can use sophisticated System 2 techniques to consistently reach their preferred inference, whereas less educated people have fewer techniques at hand and only occasionally reach their preferred inference (Kahan, Peters, et al., 2017). Most of the scholarship in this area has examined preferences that arise from ideology, not party identification, but the larger implication is that educated people can proficiently deploy motivated reasoning to reach a preferred inference.

While commitments on social issues may stem from various sources, one source is social identity (Kahan, Jenkins-Smith, & Braman, 2011). In the current era, party identification and political ideology have become anchors for social identity (Cohen, 2003; Mason, 2018), and thus motivated reasoning should be particularly strong for politicized issues. Furthermore, a reinforcing spiral between media selectivity and beliefs likely insulates partisans from media content that is incongruent with their beliefs (Feldman et al., 2014).

Many studies show an asymmetrical effect of education with a stronger effect size on the Democratic side. The perceived threat of climate change, for instance, is highest among highly educated Democrats and lowest among highly educated Republicans. In 2009, the gap on the Democratic side was 29 percentage points between those with and without a college degree respectively, whereas the gap on the Republican side was only 13 percentage points (Brewer, 2012). In a 2015 study, Newport and Dugan (2015) reported that college-educated Republicans were more likely to rate the threat as exaggerated than underestimated (74% vs. 11%), whereas college-educated Democrats were more likely to rate the threat as underestimated than exaggerated (48% vs. 25%). Highly educated Democrats strongly favor the use of stem cells in medical research, whereas less educated Democrats resemble both highly and less educated Republicans in moderately favoring their use (Nisbet & Markowitz, 2014). Similar findings, with a weak or null effect on the Republican or conservative side have been reported in other studies (Hamilton, 2011; Hamilton, Hartter, Lemcke-Stampone, Moore, & Safford, 2015; Hamilton, Hartter, Safford, & Stevens, 2014; Hamilton & Lemcke-Stampone, 2014; Joslyn & Sylvester, 2019). In one study, attitudes toward climate change, vaccines, and forestry policy were measured, and Republicans (right-wing) and Tea Party members (far right-wing) were treated as separate categories. There were consistently asymmetric effects when Democrats were contrasted with Republicans, and mostly asymmetric effects when Democrats were contrasted with Tea Party members (Hamilton, Hartter, & Saito, 2015).

There are exceptions, however. In one study, college-educated Democrats were more likely to have accurate knowledge of the Affordable Care Act than other Democrats (33% vs 7%), while college-educated Republicans were less likely to have accurate knowledge about the Affordable Care Act than other Republicans (54% vs. 22%; Hochschild & Einstein, 2015). The symmetry in effect size suggests that on non-environmental topics or novel topics, there may be no moderating effect of education.

One possible reason for predominantly asymmetric effects is that the Republican voter base is homogeneously comprised of ideological conservatives, whereas the Democratic voter base is a heterogeneous coalition of sub-groups, only some of whom are ideologically liberal (Grossmann & Hopkins, 2016). Many of these subgroups support the Democratic party because it defends their group interests, but the subgroups are not comprised of ideologically committed liberals. Among Democrats, those who have a college degree are more ideologically liberal than other Democrats (Box-Steffensmeier & De Boef, 2001). Because of the confounding between education and liberalism among Democrats, the party-by-education effect found in the literature may, to some extent, be caused by liberalism rather than mere party identification. However, when researchers focus on ideology rather than party identification, asymmetric party-by-ideology interactions are still found (Hamilton, 2011, 2008; McCright & Dunlap, 2011)

One plausible reason for mixed findings is that pertinent studies have sampled only a small set of political topics. Most studies have examined attitudes and beliefs regarding climate change or a related environmental issue. Education may be a symmetric or asymmetric polarizer on other topics. In the current study, I aim to conduct a conceptual replication of previous studies to determine whether an asymmetric moderating effect of education is found such that the polarizing effect of education among Democrats is strong, and the polarizing effect of education among Republicans is weak or null. I hypothesize that such effects will be found. I chose to study Ebola because of access to a unique dataset on Ebola-related attitudes and knowledge. Data were collected during the 2014-15 Ebola epidemic.

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Seven Ebola-related attitudes are measured in the current study, of which two are personal, two are interpersonal, and three are political. I selected several attitudes to be as comprehensive as possible in this replication attempt. The two personal attitudes are fear of being infected with the Ebola virus (fear), and estimated severity of the virus (severity). Estimated severity entails believing that Ebola is likely to be fatal, rating Ebola as a severe disease, and estimating that recovery from Ebola will be protracted. The interpersonal attitudes are suspicion of exposed Africans and suspicion of exposed Americans. Suspicion entails being wary of exposed persons and supporting strict quarantine policies.

Hypotheses

Given the Republican political framing that emphasized that Ebola was a serious threat, and that the Obama administration was ineffectively responding to the epidemic, there should be an effect of party identification, with Republicans scoring higher than Democrats in fear, severity, suspicion toward Africans, and suspicion toward Americans. Furthermore, Republicans should have different attitudes than Democrats because of ideological sensitization. Conservatives register more intense responses than liberals to negative, disgust-inducing stimuli and expend more psychological effort to combat them (Hibbing, Smith, & Alford, 2014; Inbar, Pizarro, & Bloom, 2009). Conservatives are also more concerned than liberals about contamination and purity from a moral perspective (Graham et al., 2013). Because EVD spreads through bodily fluids that evoke disgust, conservatives should have higher baseline concern about EVD even in the absence of politicization. Because Republicans are more conservative than Democrats, this contrast should be reflected across the partisan divide and not merely the ideological divide.

On the issue of suspicion, debates among national party elites are also relevant. The Democrat-controlled executive branch supported the use of post-travel monitoring—not a ban—during the epidemic, but Republicans in the House of Representatives (lower house of parliament) supported an absolute ban on visitors from affected countries (Jaffe, 2014). Given the efficacy of framing, Republicans should have become more suspicious of Africans and Americans who might have been exposed to EVD.

> **Hypothesis 1**: There is an asymmetric party-by-education effect such that highly educated Democrats are uniquely less fearful, less likely to rate EVD as severe, and less suspicious of exposed Africans and Americans than less educated Democrats and all Republicans.

The policy-related attitudes examined in this study are confidence in Western countries' preparedness (preparedness), support for low-intensity interventions, and support for high-intensity interventions. Confidence in preparedness entails believing that the U.S. and European governments are prepared to contain the spread of similar epidemics. Low-intensity interventions entail the dispatch of medical teams and humanitarian aid, i.e., food and health supplies, to affected countries, and high-intensity interventions entail the dispatch of military troops to the affected countries and the allocation of billions of dollars to assist these countries. Given the House Republicans' support for an absolute ban on visitors from affected countries, Republicans should score lower on preparedness than Democrats. Democrats also have more favorable attitudes toward government spending, so they should favor both low- and high-intensity government-funded interventions more strongly than Republicans. This effect may be weak, however, because Republicans should be concerned about infection and contamination, and may also want spending on interventions.

Hypothesis 2: There is an asymmetric party-by-education effect such that highly educated Democrats are more confident in Western preparedness and more supportive of all interventions than less educated Democrats and all Republicans.

Lastly, I examined knowledge of Ebola, which was measured through true-false statements. The statements mostly focused on two public health topics, contagion and infection. They did not correspond to politically loaded topics such as immigration and immigration policy. I did not have a priori hypotheses about effects in knowledge.

Method

Sample

Data for this study came from Emory University's 2015 Ebola Survey. The study sample comprised of 1,461 non-institutionalized, English-speaking adults in the U.S., ranging from 18 to 91 in age. This sample was drawn from KnowledgePanel, an online proprietary, probability-based panel created by GfK (GfK, 2012). Address-based sampling was used instead of random-digit dialing for increased coverage of households without landline telephones. Of the 2,664 panel members who were invited to take the survey, 55% accepted the invitation. Data were collected from April 30 through May 8, 2015, a period when approximately 30 Ebola cases were being reported weekly (World Health Organization, 2015a, 2015b, 2015c, 2015d). Participants receive a variety of incentives for GfK studies, which include small cash awards, gift prized, and sweepstakes opportunities. The specific incentives offered for this study were not recorded. Informed consent was obtained from all participants prior to participation in the survey.

The sample was 50.8% male and 49.2% female; 73% white, 9.9% Hispanic or Latino, 8.2% black or African-American, 5.3% other, and 3.5% bi- or multiracial. The mean age was 49.9 (*SD* = 17.1) with 50% of participants in the age range of 35–63 years. The modal education level was high school diploma or equivalent (27.3%). The 25th and 75th percentiles for annual household income were $30,000-34,999 and $100,000-$124,999, respectively, and 63.0% of respondents reported their marital status as married or cohabiting. The composition of the panel closely mirrors that of the U.S. population (GfK, 2012). According to the GfK project report for this study, the weighted distribution of the panel perfectly represents that of U.S. adults.

Measures

The web-administered survey consisted of 73 questions pertaining to factual knowledge, attitudes, and beliefs. The questions used in this study are in the Appendix (see Supplementary Materials). Answers were initially coded on a 5-point Likert scale ranging from "strongly agree" to "strongly disagree". This coding was reversed so that higher values indicate stronger agreement. Some demographic variables, measured earlier, were merged into the dataset. A subset of questions was analyzed for this study. Each dependent factor was modeled using multi-item scales. Data are available at https://osf.io/9mkz5/

Party Identification

Party identification was derived using a series of three questions, listed in the Appendix (see Supplementary Materials). First, participants were asked if "generally speaking," they thought of themselves as "Republican," "Democrat," "Independent," "Another party, please specify" or "No preference." Participants who chose Republican

or Democrat were asked if they were "strong" or "not strong" Republicans or Democrats respectively. Participants who gave any other answer were asked a dichotomous question about which party they leaned toward, "Do you think of yourself as closer to the Republican/Democratic party?" A scale was then derived with values ranging from 1 to 7 such that higher values indicated stronger support for the Democratic Party. Strong Republicans, not strong Republicans, and those who lean Republican were coded as 1, 2, and 3 respectively. Strong Democrats, not strong Democrats, and those who lean Democrat were coded as 7, 6 and 5 respectively. Participants were coded as 4 if they met any of these conditions: (a) they self-classified as "Independent" and leaned toward neither major party, (b) they self-classified as "another party" and leaned toward neither major party, (c) they self-classified as "no preference" and leaned toward neither major party, or (d) they refused to answer all pertinent questions. Answers to the initial questions used for derivation (party preference, strong vs. not strong, closer to which party) were not provided by GfK. The code used for the derivation is in the Appendix (see Supplementary Materials).

I excluded participants who had a value of 4 on the derived scale. Although a value of 4 on the derived scale ostensibly denotes centrism, participants could have been coded 4 due to support for the Libertarian or Green party. Consequently, this value of 4 does not truly map to centrism. I transformed the derived scale to a 6-point scale, excluding the value of 4. However, I utilized data from all respondents in the computation of standard errors using the *svy* command and *subpop* option in Stata 15.

Education

Education was measured using a 14-point scale from "no formal education" to "professional or doctorate degree." I transformed it to a 6-point scale because of granularity of measurement at the elementary-school level, which was split into 8 items ranging from "1st, 2nd, 3rd or 4th grade" through "high school graduate." In the 6-point scale, values from the "no formal education" through "12th grade NO Diploma" (in total 8.7% of the sample) were coded as 1 (less than high school). High school graduates were coded as 2. Those with "some college" or an associates' degree were coded as 3. Bachelors, masters, and professional/doctorate degrees were coded as 4, 5, and 6 respectively. This ordinal method enables better modeling of a monotonic effect and it resembles an ordinal method used by other scholars (Appleby & Federico, 2018; Ekstrom, Smith, Williams, & Kim, 2019; Federico, Williams, & Vitriol, 2018). The results do not substantively change if a series of dummy variables is used to code levels of education (see the open dataset).

Attitudes

Attitude scales contain original items designed for this survey. Information on how social cognitive theory and the Health Belief model were used to guide item creation can be found in Painter, DiClemente, and von Fricken (2017).

Fear was measured using five items (α = .78), including "My risk of getting infected with Ebola is high" and "There is a good possibility that I will get infected with Ebola" The fifth question, "My chance of getting infected with Ebola are____" was on a 10-point scale ranging from "0 – 10%" through "91-100%"

Estimated severity was measured using four items (α = .76), e.g., "Ebola is a severe disease" and "If a person becomes infected with Ebola, it is likely that they would die."

Suspicion toward exposed Africans was measured through 8 items (α = .89), e.g., "Students from African countries where Ebola has been detected should not be permitted to enroll in colleges or universities in the United States,"

and "If I sit next to someone on the airplane from countries where Ebola has been detected, there is a strong likelihood that I would get infected with Ebola."

Suspicion toward exposed Americans was measured using six items (α = .89) that referred to American troops, healthcare workers, government employees and business people who had traveled to affected countries in Africa, e.g., "US government employees and business people who travel to African countries where Ebola has been detected should be tested for the Ebola virus before being allowed to return to the US," and "US government employees and business people who travel to African countries where Ebola has been detected should be quarantined for 21 days, even if they test negative for the Ebola virus."

Estimated Western preparedness was measured using two items (α = .82): "How prepared do you think (the U.S. government is/European national governments are) when it comes to containing the spread of potential future global health epidemics within their geographic areas."

Support for low-intensity interventions was measured using two items (α = .76): "I support the US sending medical teams to countries affected by Ebola" and "I support the US sending humanitarian aid in the form of food and health supplies to countries affected by Ebola." Support for high-intensity intervention was also measured using two items (α = .83): "I support the US policy to allocate billions of dollars to assist countries in confronting the Ebola crisis" and "I support the US policy to send troops to Africa to fight the Ebola epidemic)."

For attitudinal scales with more than two items, i.e., all scales except policy support, factor analyses were conducted to ensure that that a single factor loaded on all items. The fear factor had excellent fit, χ^2 = 4.38, df = 5, p = .497, RMSEA < .001, CFI = 1. The other factors had inadequate fit as indexed by the chi-square and RMSEA, but good fit as indexed by the CFI. The Appendix (see Supplementary Materials) contains the scale items for all outcomes. A combined seven-factor confirmatory factor analysis (CFA) was conducted in Mplus. The correlations between factors are displayed in Table 1.

Table 1

Correlations Between Latent Attitudes in a Confirmatory Factor Analysis

Factor 1 / Factor 2	Estimate	Est./*SE*	*p*
Severity			
Fear	-0.30	-7.85	< .001
Suspicion of Africans			
Fear	0.30	10.72	< .001
Severity	0.19	6.01	< .001
Suspicion of Americans			
Fear	-0.04	-1.23	.220
Severity	0.47	13.91	< .001
Suspicion of Africans	0.66	34.82	< .001
West. Preparedness			
Fear	-0.16	-4.15	< .001
Severity	0.04	0.92	.320
Suspicion of Africans	-0.26	-8.69	< .001
Suspicion of Americans	-0.11	-3.40	.001

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Factor 1 / Factor 2	Estimate	Est./SE	p
Support-Low			
Fear	-0.17	-4.95	< .001
Severity	0.33	9.09	< .001
Suspicion of Africans	-0.33	-10.24	< .001
Suspicions of Americans	0.06	1.54	.120
West. Preparedness	0.25	7.62	< .001
Support-High			
Fear	0.05	1.38	.166
Severity	0.09	2.52	.012
Suspicion of Africans	-0.29	-8.18	< .001
Suspicion of Americans	-0.10	-2.74	.006
Preparedness	-0.24	6.94	< .001
Support-Low	0.79	35.94	< .001

Note. W. = Western. Results are survey-weighted and standardized. Effects coding was used instead of fixing the first item loading to 1. Errors for the second and fifth items in suspicion of Americans were allowed to covary. Chi-square = 1615.88, *df* = 354, *p* < .001, Scaling correction = 1.39, RMSEA = 0.05, 90% CI = (0.049, 0.054), CFI = .914. Item loadings are in the Supplementary Materials.

The model had moderately good fit. There was a strong correlation between support for low- and high-intensity interventions, but regression analyses, reported later, showed that ideology had associations of different strengths with support for low- vs. high-intensity interventions. There was a correlation between suspicion of Africans and suspicion of Americans, but not of such magnitude to suggest the factors were indistinguishable.

Knowledge

The survey included 11 true-or-false statements measuring knowledge about Ebola. These were original items created for this study. The scale was focused on infection and precautionary measures. The scale lacked items about other domains, such as the current epidemic, prior epidemics, public health interventions, expenditures, and implemented quarantines. Topics included whether Ebola could be spread through sexual contact, whether the virus lives on physical surfaces for only 24 hours, and whether a vaccine is available to prevent infection.

Participants could answer "true," "false," or "I don't know." Participants could also refuse to answer; refusals were coded as missing. The correct answer was coded 1. The wrong answer and "I don't know" were coded 0.

A two-parameter logistic item response theory (IRT) analysis of the 11 items showed that one item was a weak measure of knowledge and it was discarded. An IRT analysis of the remaining 10 items was conducted, and a latent knowledge score was derived. A histogram of this score indicated that scores were normally distributed except for an extremely high frequency of scores (>6%) at the scale minimum. A closer analysis revealed that many participants had chosen "I don't know" for all or most questions, leading to this bimodality. This distribution suggested that "I don't know" was not an indicator of poor knowledge to the same extent as wrong answers (where *wrong* means "false" where the correct answer is "true," and "true" where the correct answer is "false"). Removing all participants who answered "I don't know" would have eliminated a large portion of the sample. As a compromise, I re-conducted the IRT analysis removing the 177 participants out of 1,471 who answered "I don't know" to 9 or 10 (out of 10) items. These participants were coded as having missing scores for knowledge. The revised distribution of latent scores was normal.

Data Analysis

Data were analyzed using weighted linear regression in Stata. Party affiliation was entered as a factor variable. Education was entered as a continuous variable, and party-by-education interaction terms were computed by multiplication. Gender, marital status, income, and age were entered as covariates to minimize omitted-variable bias. I computed and plotted estimated marginal means with 95% confidence intervals for post hoc analyses of party-by-education interactions, while also noting whether the regression coefficients were significant. Survey weighting was used unless otherwise noted.

Results

Descriptive statistics for all dependent variables are in Table 2. Most variables were normally distributed, but respondents were unafraid of being personally infected by Ebola, and fear was thus positively skewed.

Table 2

Descriptive Statistics for Unstandardized Variables (Weighted)

Variable	*M*	*SD*	*N*
Fear	1.87	0.70	1,464
Severity	3.82	0.66	1,460
Suspicion of Africans	3.14	0.81	1,463
Suspicion of Americans	3.66	0.78	1,460
Western Preparedness	2.31	0.76	1,458
Low-Intensity Policy Support	3.68	0.85	1,461
High-Intensity Policy Support	3.02	0.94	1,460
Knowledge	-0.04	1.02	1,294

Note. Knowledge is a latent variable derived through IRT. Its *M* and *SD* differ slightly from 0 and 1 because of survey weighting. The count for knowledge is lower because scores were not computed for participants with "don't know" in 9 or 10 (out of 10) answers.

The modal score, assigned to 21% of respondents, was the scale minimum, and the 95th percentile score was the midpoint. However, the skewness of .56 did not warrant alternatives to regression. Table 1 contains correlations between only those attitudes submitted to CFA. The correlations between all attitudes are displayed in Table 3.

Respondents who were fearful of Ebola were also more suspicious of exposed Africans. The correlation analysis, but not the latent factor analysis, also suggested they were more suspicious of exposed Americans. The overall correlation pattern suggested that highly educated Americans may have had a more sophisticated understanding of Ebola overall, feeling less fearful about infection but recognizing the virus's severity. Estimated severity was inversely correlated with fear and suspicion, but positively correlated with knowledge. Severity was likely correlated with knowledge because severity warrants caution, and most items in the knowledge scale pertained to cautiousness and precaution taking (see items 3, 4, 5, 7, 8, 9, and 10), For these items, the more cautious answer was the correct answer. In addition, items 2, 3, and 4 in the severity scale could be construed as tests of factual knowledge. They pertained to likelihood of death given infection, likelihood of difficult recovery given infection, and lethality of the virus relative to the measles virus.

Table 3

Pairwise Correlations Between All Variables (Unweighted)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Fear	-												
2. Severity	-.232***	-											
3. Susp. Af.	.296***	.140***	-										
4. Susp. Am.	.081**	.295***	.660***	-									
5. Prep.	-.147***	.011	-.216***	-.137***	-								
6. Low Pol.	-.198***	.239***	-.313***	-.041	.219***	-							
7. High Pol.	-.010	.058*	-.269***	-.130***	.217***	.639***	-						
8. Knowledge	-.160***	.236***	-.015	.082**	.007	.141***	.059*	-					
9. Female	.046	-.031	.060*	.031	-.031	-.026	-.006	-.005	-				
10. Married	-.132***	.100***	-.009	.009	-.040	-.010	-.024	.071*	-.065*	-			
11. Educ.	-.250***	.136***	-.295***	-.158***	.083***	.184***	.102***	.097***	-.028	.128***	-		
12. Income	-.260***	.124***	-.174***	-.084***	.031	.106***	.008	.135***	-.085***	.343***	.417***	-	
13. Age	-.064*	.081**	.015	.069**	-.055*	.081**	.056*	.001	.013	.162***	-.007	.006	-
14. Party	.030	-.022	-.204***	-.150***	.159***	.181***	.285***	-.008	.109***	-.135***	.039	-.059*	-.060*

Note. Female and married are dummy coded. Quar. = pro-quarantine attitudes; Low Pol. = support for low-intensity interventions; High Pol. = support for high-intensity interventions. Party is coded with higher values indicating strong Democratic/weaker Republican affiliation. Age is entered as a continuous variable.

*p < .05. **p < .01. ***p < .001.

Fear and severity were both positively correlated with suspicion of Africans, which suggests that people who considered Ebola to be salient were more likely to favor travel and immigration restrictions. People who were fearful of infection and suspicious of exposed persons were less likely to think Western countries were prepared to deal with an outbreak, an estimation that may have underlay their fear and suspicion.

However, people who feared infection were *less* supportive of low-intensity interventions. This lack of support was probably not due to fear of transmission via medical personnel because suspicion of Americans was not significantly correlated with support for such interventions. People who rated Ebola as severe were more supportive of interventions, suggesting that people believe that the strength of an intervention should be proportional to the severity of a problem.

Figures 1 and 2 display the estimated marginal means for all factors, plotted after regressions whose results are displayed in Supplementary Material. Figure 1 contains the plots for factors where an education-by-party interaction effect was found. Separate lines are plotted for people with less than a high school diploma and those with a professional or graduate degree. The graphs were created after standardizing the dependent variable, which makes the y-axis uniform across the figures.

The standardized regression results for the primary predictors are displayed in Table 4. To compute standardized effect sizes, the dependent variable and all continuous predictors were standardized around the weighted mean and standard deviation.
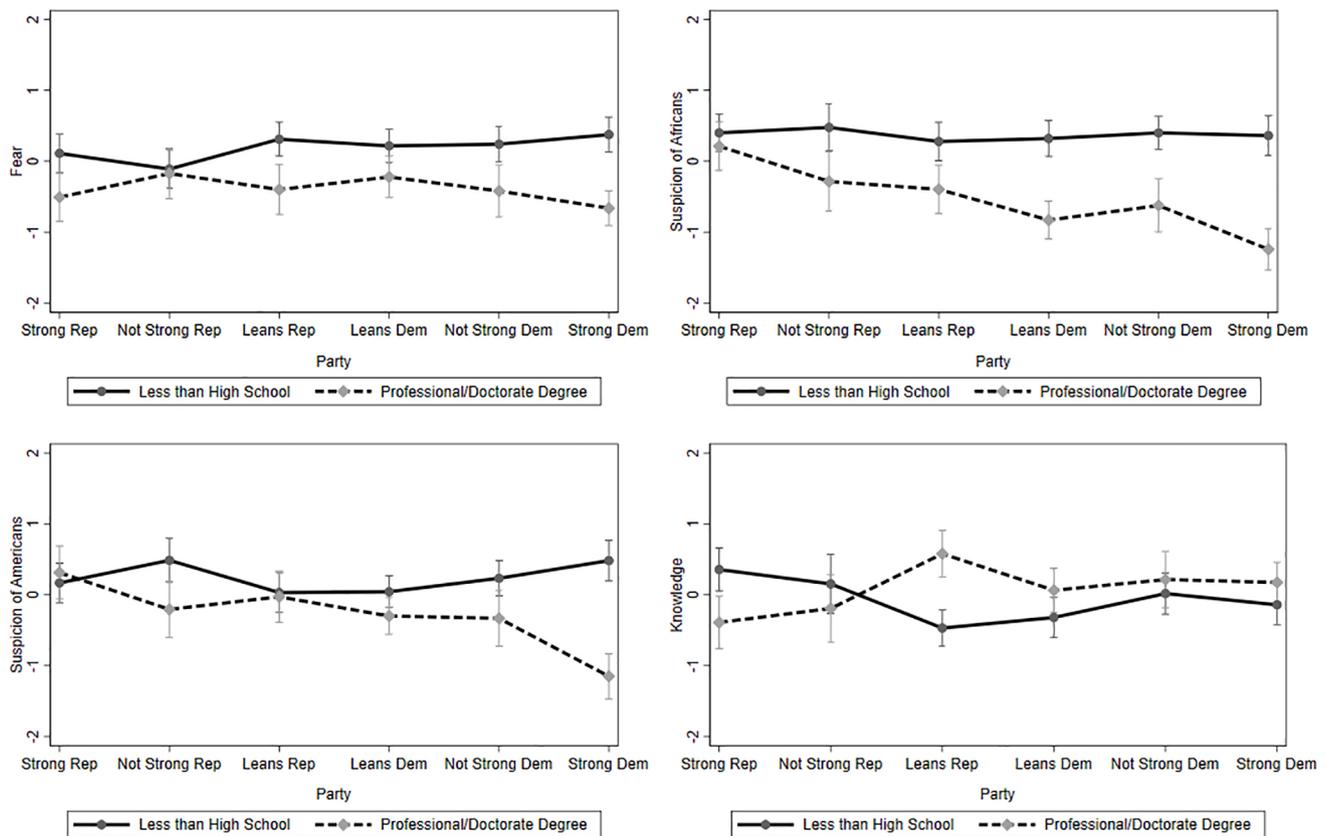
Figure 1. Estimated marginal means of fear, suspicion of Africans, suspicion of Americans, and Ebola knowledge by party affiliation and education with gender, marital status, age, and income as covariates.

In the case of *fear of infection*, the statistical results were non-significant, but the graphed results suggested an asymmetric interaction. To probe this interaction, I ran a regression model in which both education and party were entered as categorical variables, and I evaluated a contrast of the marginal values in the four extreme corners, i.e. combinations of Strong Democrat vs. Strong Republican with lowest education level vs. highest education level. The fear score for highly educated Strong Democrats, which was 1.75, was significantly lower than the fear scores for less educated Strong Democrats, $t = -3.53$, $p < .001$, highly educated Strong Republicans, $t = -2.80$, $p = .01$, and less educated Strong Republicans, $t = -2.02$, $p = .04$, all of which were in the range of 2.20 to 2.34. This result should be interpreted cautiously because it was only found through an alternative post hoc analysis.

For both *suspicion of Africans* and *suspicion of Americans*, the hypothesized interaction effect was evident. There was greater divergence between Democrats and Republicans among the most educated respondents, and this effect was asymmetric. Thus, strong Democrats with a professional or doctoral degree were unique in being less fearful of being infected, less suspicious of exposed persons, and less supportive of quarantine policies than other respondents. In all three cases, there was also an overall effect of education, albeit small in magnitude, such that highly educated respondents were less cautious than less educated respondents.

Table 4

Regression Results With Standardized Coefficients (Betas)

Variable	Fear	Severity	Suspicion of Africans	Suspicion of Americans	Western Prep.	Low-Intensity Policy	High-Intensity Policy	Knowledge
Intercept	-0.17	-0.06	0.06	-0.12	-0.05	-0.09	-0.50***	0.08
Party								
Strong Rep.	0	0	0	0	0	0	0	0
Not Strong Rep.	-0.01	0.05	-0.14	0	0.18	-0.09	0.09	-0.05
Leans Rep.	0.17	-0.07	-0.31***	-0.21*	0.08	-0.03	0.08	-0.14
Leans Dem.	0.17	-0.12	-0.45***	-0.31***	0.31**	0.21*	0.49***	-0.24*
Not Strong Dem.	0.11	-0.03	-0.32***	-0.20*	0.34***	0.18	0.50***	0.02
Strong Dem.	0.11	-0.01	-0.58***	-0.36***	0.44***	0.52***	0.89***	-0.09
Education	-0.16*	0.09	-0.05	0.04	0.11	0.05	0.07	-0.18*
Education X Party								
Strong Rep.	0	0	0	0	0	0	0	0
Not Strong Rep.	0.14	-0.14	-0.14	-0.21	0.05	0.13	0.14	0.10
Leans Rep.	-0.02	0.12	-0.12	-0.05	-0.06	0.08	-0.10	0.44***
Leans Dem.	0.05	-0.02	-0.24**	-0.12	-0.08	0.04	0.02	0.28**
Not Strong Dem.	-0.01	0.04	-0.21*	-0.18	-0.22*	0.09	-0.03	0.23*
Strong Dem.	-0.11	-0.03	-0.36***	-0.45***	0.07	0.10	0.05	0.26**
R^2 **Initial**	.118	.045	.129	.057	.037	.085	.109	.037
R^2 **Final**	.122	.050	.140	.080	.045	.086	.113	.054
R^2 **Change**	.004	.005	.011	.024	.008	.001	.004	.017

Note. Covariates were gender, marital status, income, and age. Initial and Final R^2 values show variance explained before and after education-by-party interaction terms are added.

*$p < .05$. **$p < .01$. ***$p < .001$.

Among Democrats, higher education was predictive of greater *knowledge*, as indicated by higher marginal estimates, but this difference was not statistically significant. On the Republican side, however, there was an unusual pattern. Among respondents who leaned Republican, the best educated had a knowledge score 0.75 *SD* higher than the least educated. Among highly educated respondents who were strongly Republican, however, the best educated had a knowledge score 1 *SD* lower than the least educated. No knowledge questions addressed politically loaded topics such as immigration, so it is difficult to ascertain the cause of this interaction. These results should be interpreted cautiously for several reasons. First, the knowledge scale did not sample from several domains, but was focused on contagion and infection, making it a scale of prevention-related knowledge rather than overall knowledge. Had the scale concentrated on other domains, such as public policy, scores may have differed (although this problem cannot be assessed without empirical data). Second, the correct response to nine items (of the ten retained) was true. Participants who uniformly answered "true" therefore received a high score, even though that answering pattern could represent a guessing heuristic. Lastly, many respondents who received a low knowledge score answered, "I don't know" to many questions. They did not actually select the wrong answer and they were perhaps knowledgeable but diffident.

Figure 2 contains the plots for estimated severity, estimated Western preparedness, and two types of intervention support. No interaction effect was found for estimated *severity*, but the shape of the severity interaction resembled the knowledge interaction. When interaction terms were removed from the regression to estimate main effects,

education had a significant effect, $B = .05$, $SE = .02$, $t = 3.06$, $p = .002$, suggesting that education made people cognizant of EVD's severity. Overall, however, very few participants gave low severity ratings to EVD, with 72% of scores at 3.5 or higher on a 5-point scale. The severity items were easy and factual, and most respondents likely knew that EVD was lethal. In contrast, fear and types of suspicion were measured with non-factual questions that tapped into subjective perceptions.
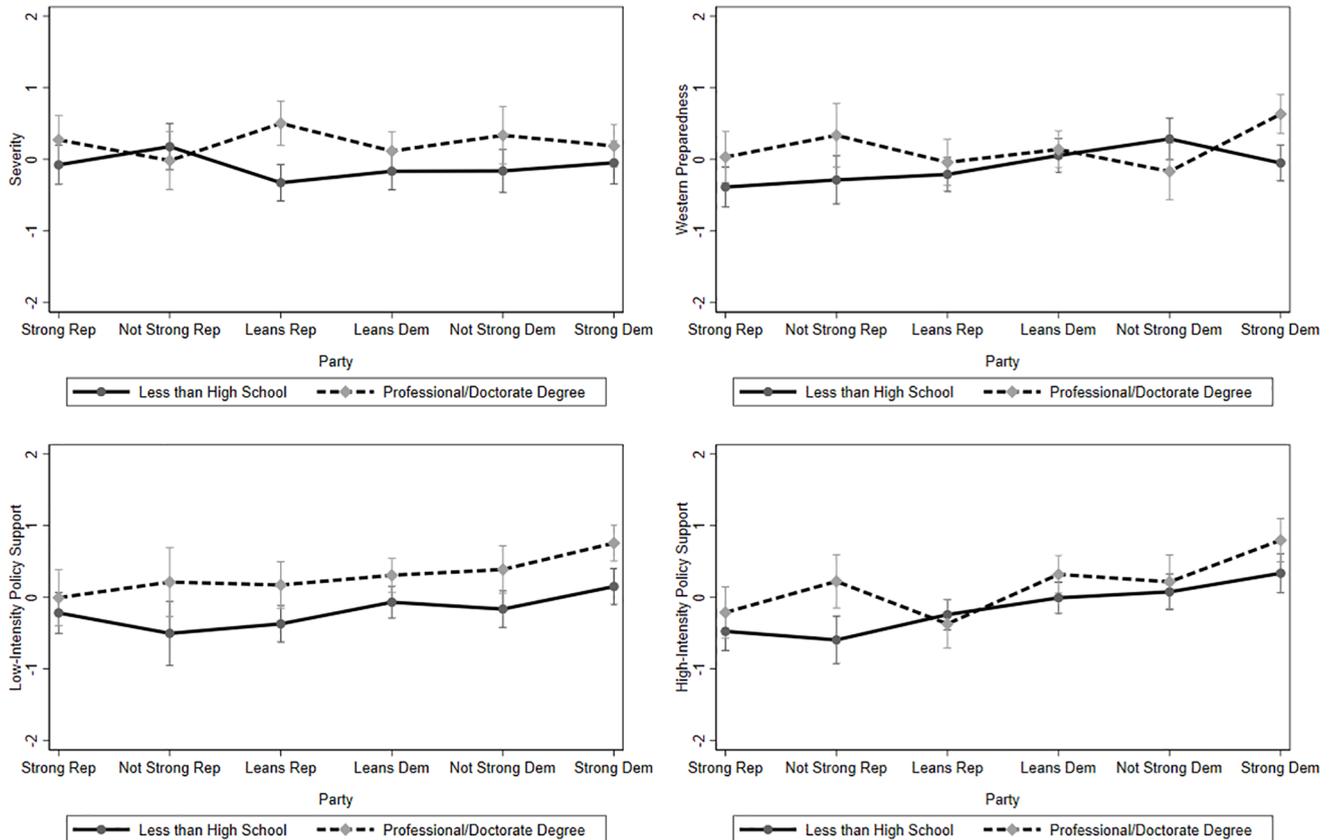

Figure 2. Estimated marginal means of perceived severity of Ebola, Western preparedness, low-intensity policy support, and high intensity policy support by party affiliation and education with gender, marital status, age, and income as covariates.

For perceived *Western preparedness* in handling future outbreaks, highly educated strong Democrats were again the most divergent group. Their mean score of 2.79, 95% CI = [2.58, 2.99] surpassed that of other groups, who scored between 2 and 2.5. However, interaction terms were non-significant in the regression model, and the overall pattern was unclear. I removed the interaction terms to estimate a main effect of party identification. Democrats had more positive estimates, either indicating confidence in government or in the Obama administration. The effect of education was weak. When objective preparedness estimates are unavailable, both well and poorly informed people may similarly estimate preparedness, and thus variation may primarily be driven by trust in government.

There was stronger overall support for *low-intensity interventions*, $M = 3.68$, $SD = 0.85$, 95% CI [3.62, 3.72] than *high-intensity interventions*, $M = 3.02$, $SD = 0.94$, 95% CI [2.97, 3.07], $M_{diff} = -0.65$, $F(1,1459) = 931.08$, $p < .001$. In neither case was there evidence of a party-by-education interaction effect but there was a main effect of party, with Democrats more supportive than Republicans (see Table 4).

To test whether the main effect of party was stronger for high-intensity than low-intensity interventions, I tested models with party as a continuous variable and compared the linear coefficient of party. The main effect of party was indeed stronger for high-intensity interventions, $B = 0.17$, $SE = .02$, $t = 10.81$, $p < .001$, than low-intensity interventions, $B = 0.09$, $SE = .02$, $t = 6.56$, $p < .001$. This difference was statistically significant, F_{Wald} (1,1465) = 34.36, $p < .001$. Even though Republicans were more fearful of EVD and EVD-carrying entities, they were less keen on government projects, especially when those projects were costly. This contrast suggests a combination of a strong negativity bias and a preference for small government among Republicans. After controlling for party affiliation, education predicted support for both low- and high-intensity interventions, suggesting that people with higher education attainment engaged in less delay discounting and recognized the long-term benefits of interventions (Reimers, Maylor, Stewart, & Chater, 2009; Shamosh & Gray, 2008).

Supplementary Analysis

Two supplementary analyses were conducted at the suggestion of anonymous reviewers. These two analyses were done *after* all primary analyses were complete, an order of analyses which should be considered if familywise error rate is a concern. The first analysis includes knowledge as a covariate and the second analysis includes knowledge as a moderator. Some limitations should be noted at the outset. First, the sample size is 12% smaller because the knowledge score was coded as missing for the 177 participants out of 1,471 who answered "I don't know" to 9 or 10 items. With the removal of this non-random portion of the sample, the supplementary analyses are not exactly comparable to the main analyses. Also, an essential difference between Republicans and Democrats is factual knowledge content, which arises through the discursive process through which partisan elites cite true and specious facts when communicating with citizens. These true and specious facts then influence individual attitudes so controlling for factual knowledge can induce overcontrol bias, i.e., conditioning on a mediator (Elwert & Winship, 2014).

In the first supplementary analysis, knowledge was added as a covariate to the full model. The results are in Table 5. The coefficients for knowledge indicate that, after controlling for all other factors, knowledgeable respondents were less fearful of being infected with the Ebola virus, suggesting that they accurately gauged this risk. They also gave higher severity ratings to Ebola, as would be expected of knowledgeable respondents. They supported both low- and high-intensity policies more strongly, which suggests they inferred that intensive governmental policies were necessary to maintain low risk of an international epidemic, given the high severity of the virus. Lastly, they were more suspicious of Americans but not Africans. Most items in the suspicion-of-Americans scale pertained to quarantine and mandatory testing, whereas most items in the suspicion-of-Africans scale pertained to disgust and aversive behavior. Consequently, greater suspicion of Americans could be a manifestation of greater support for active policies.

A comparison of the results in Tables 4 and 5 indicates that adding knowledge to the model had no substantial effect on the pattern of interaction effects. There were modest increases in coefficient magnitude for party, suggesting that knowledge is a mild suppressor of party effects in the case of severity, suspicion of Africans and suspicion of Americans. Among education-by-party effects, the only notable change was that the coefficient for highly educated not-strong Republicans increased from .14 to .20, and its p value thereby dropped below the .05 level of statistical significance. Again, however, the pattern of results remained the same: among not-strong Republicans, highly educated and less educated respondents were similar but among strong Democrats, highly educated respondents were less fearful than less educated respondents.

Table 5

Regression Results With Standardized Coefficients (Betas), Controlling for Knowledge

Variable	Fear	Severity	Suspicion of Africans	Suspicion of Americans	Western Pre.	Low-Intensity Policy	High-Intensity Policy
Intercept	-0.17	-0.06	0.06	-0.12	-0.05	-0.09	-0.50***
Knowledge	-0.11***	0.20***	0.03	0.12***	-0.01	0.13***	0.066*
Party							
Strong Rep.	0	0	0	0	0	0	0
Not Strong Rep.	-0.01	0.02	-0.20	-0.09	0.17	-0.13	0.07
Leans Rep.	0.13	-0.10	-0.41***	-0.30**	0.11	0.03	0.11
Leans Dem.	0.15	-0.10	-0.52***	-0.37***	0.25*	0.28**	0.52***
Not Strong Dem.	0.11	-0.04	-0.36***	-0.29**	0.36***	0.22*	0.53***
Strong Dem.	0.14	-0.09	-0.68***	-0.46***	0.38***	0.51***	0.90***
Education	-0.18**	0.08	-0.10	-0.01	0.09	0.03	0.12
Education X Party							
Strong Rep.	0	0	0	0	0	0	0
Not Strong Rep.	0.20*	-0.15	-0.09	-0.17	0.05	0.15	0.11
Leans Rep.	0.07	0.11	-0.07	-0.03	-0.08	0.10	-0.16
Leans Dem.	0.07	-0.02	-0.20*	-0.06	-0.07	0.06	-0.04
Not Strong Dem.	0.06	0.01	-0.20	-0.18	-0.21	0.08	-0.08
Strong Dem.	-0.08	-0.01	-0.32***	-0.46***	0.09	0.13	0.03
R^2	.127	.092	.163	.117	.038	.103	.126

Note. Covariates were gender, marital status, income, and age.

*$p < .05$. **$p < .01$. ***$p < .001$.

In the second supplementary analysis, knowledge was retained as a covariate, the knowledge-by-party interaction was added to the model, and education was removed from the model. The goal was to determine whether education-by-party interactions without knowledge resemble knowledge-by-party interaction without education. The results of the second supplementary analysis are in Table 6. The main effects of party remain similar to earlier models. The interaction effects, however, differ to some degree. Figure 3 and Figure 4 show these interaction effects of party and knowledge.

Table 6

Regression Results of Knowledge-By-Party Interaction With Standardized Coefficients (Betas)

Variable	Fear	Severity	Suspicion of Africans	Suspicion of Americans	Western Pre.	Low-Intensity Policy	High-Intensity Policy
Intercept	-0.25*	0.14	0.28*	0.19	<0.01	-0.10	-0.57***
Party							
Strong Rep.	0	0	0	0	0	0	0
Not Strong Rep.	0.02	0.01	-0.20	-0.11	0.18	-0.11	0.07
Leans Rep.	0.14	-0.09	-0.41***	-0.31***	0.10	0.04	0.10
Leans Dem.	0.16	-0.09	-0.55***	-0.40***	0.25*	0.31**	0.54***
Not Strong Dem.	0.13	-0.04	-0.35***	-0.29**	0.35**	0.21	0.52***
Strong Dem.	0.10	-0.08	-0.75***	-0.55***	0.40***	0.53***	0.92***
Knowledge	-0.07	0.19**	0.16*	0.12	0.00	0.06	0.03

Variable	Fear	Severity	Suspicion of Africans	Suspicion of Americans	Western Pre.	Low-Intensity Policy	High-Intensity Policy
Knowledge X Party							
Strong Rep.	0	0	0	0	0	0	0
Not Strong Rep.	0.11	-0.09	-0.13	-0.07	-0.15	0.02	0.10
Leans Rep.	-0.06	0.16	-0.04	0.13	-0.05	0.10	-0.04
Leans Dem.	-0.07	0.09	-0.23**	-0.02	-0.01	0.16	0.14
Not Strong Dem.	-0.01	-0.03	-0.27*	-0.14	0.09	0.11	0.10
Strong Dem.	-0.19	-0.05	-0.17	< 0.01	0.02	0.01	-0.06
R^2 **Initial**	.105	.081	.102	.071	.027	.091	.115
R^2 **Final**	.113	.089	.110	.077	.032	.095	.121
R^2 **Change**	.008	.008	.008	.006	.005	.004	.006

Note. Covariates were gender, marital status, income, and age. Education was not a covariate. Initial and Final R^2 values show variance explained before and after knowledge-by-party interaction terms are added.

$*p < .05.$ $**p < .01.$ $***p < .001.$
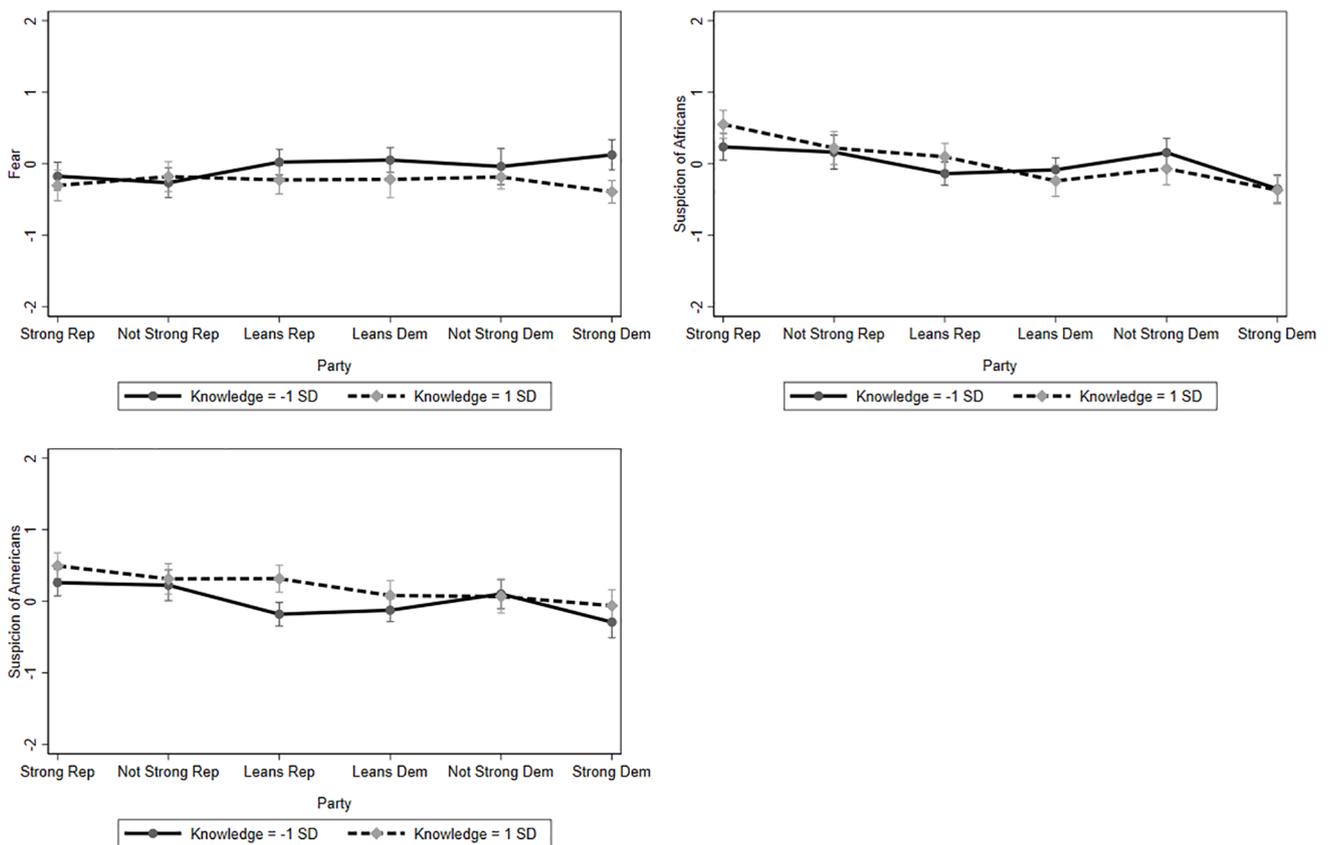
Figure 3. Estimated marginal means of fear, suspicion of Africans, and suspicion of Americans by party affiliation and knowledge with gender, marital status, age, and income as covariates.
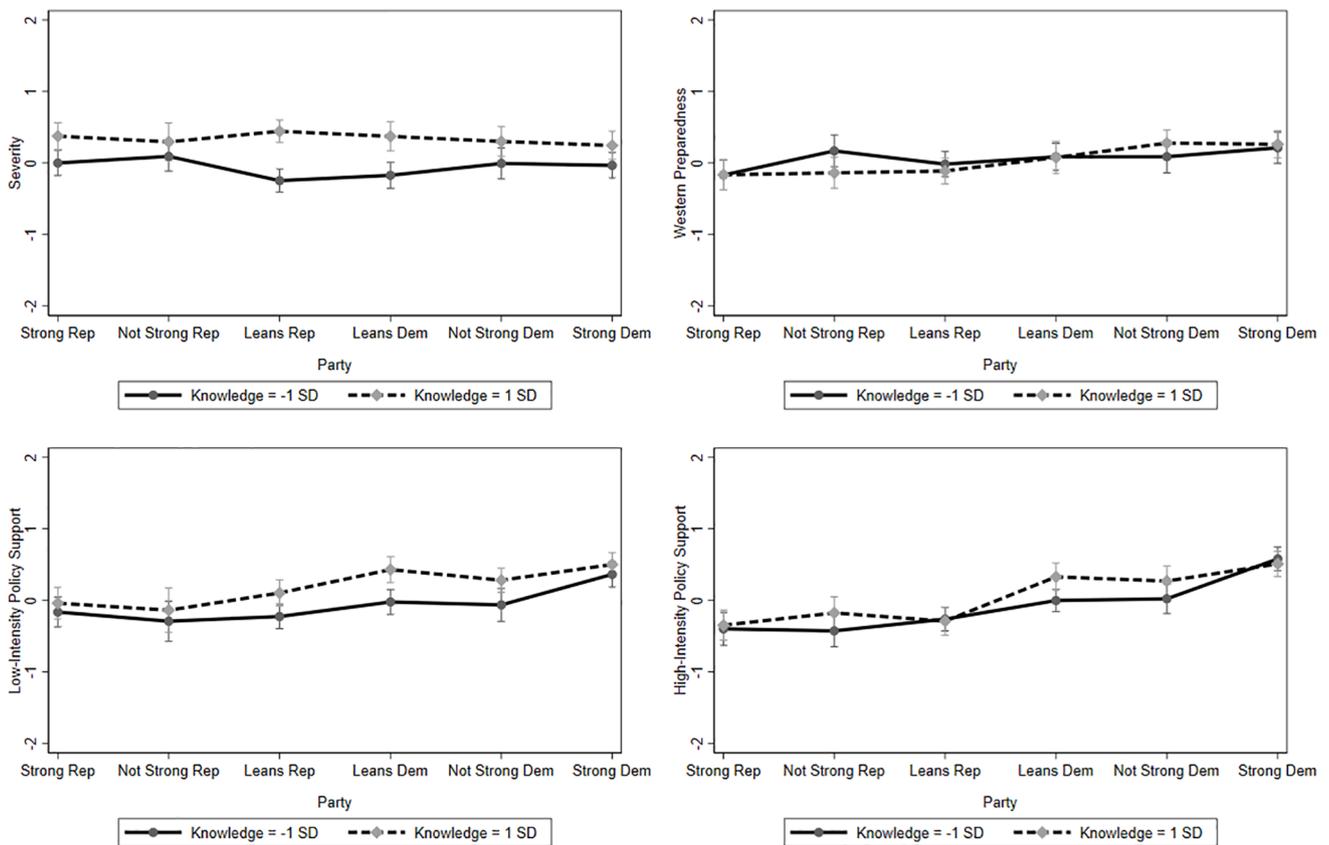
Figure 4. Estimated marginal means of perceived severity of Ebola, Western preparedness, low-intensity policy support, and high intensity policy support by party affiliation and knowledge with gender, marital status, age, and income as covariates.

In three cases—suspicion of Americans, estimated severity, and low-intensity policy—there was a knowledge effect among those weakly leaning toward a party but not found among those who were moderately (not strong) or strongly leaning toward a party. These results suggest that knowledge has an effect in the middle but not on the poles of the party spectrum and that strong partisans may be more constrained by party messaging than moderates. However, these results should be interpreted with caution given the absence of similar effects in the other four outcomes and the problems described at the beginning of this section.

Discussion

Previous research on education and partisanship has suggested that education exerts an asymmetric polarizing effect such that higher education is strongly associated with greater liberalism or greater agreement with scientific experts only among Democrats. In the current study, which attempts a conceptual replication of this previous work, I found evidence of the hypothesized asymmetrical effect in three outcomes: fear of personal infection, suspicion of exposed Africans, suspicion of exposed Americans. The asymmetrical effect in fear was only found through a special post hoc analysis and should be interpreted cautiously. The other two outcomes with an asymmetrical effect—suspicions of exposed Africans and suspicion of exposed Americans—were laden with emotional negativity toward a group of people. In all other outcomes (estimated severity, Western preparedness, support

for low-intensity interventions, support for high-intensity interventions, and knowledge), there was little or no evidence of the hypothesized interaction effect. This study can neither be labeled a successful replication nor a failed replication because of the mixed findings.

Right-wing elite discourse around Ebola and immigration may have triggered counter-discourse among Democratic elites, which had an exclusive effect on educated Democrats. As a result, educated Democrats may have developed uniquely liberal attitudes toward immigrants and travelers (Greer & Singer, 2017). The relative paucity of discourse on topics such as the virus's severity and the desirability of low- and high-cost interventions may have forestalled an asymmetric effect in those outcomes.

Some attitudes of highly educated Democrats aligned with those of health professionals, who promoted post-travel monitoring rather than severe quarantine policies (Drazen et al., 2014), and who assessed the risk of EVD spreading to the U.S. as low (Gomes et al., 2014; Rainisch et al., 2015). This greater alignment with the scientific community may be a combined consequence of greater social identification with scientists and higher exposure to frames that encouraged such alignment.

If highly educated partisans are always responsive to frames, highly educated Republicans should have had markedly higher scores on fear, suspicion, and pro-quarantine attitudes than less educated Republicans. This effect was absent, suggesting that Zaller's (1992) theory about framing may be bounded or partially outdated; some Republican frames may penetrate discourse among all Republican voters. However, an alternative interpretation is that education is not a good proxy for engagement and interest among Republicans. Had this study used direct measures of engagement and interest, it may have revealed consistent differences between more engaged and less engaged Republicans. Better measures may have also yielded different results— tests of fit indicated there was room for improvement in these measures.

The relative consistency of attitudes across all Republicans does not suggest that education has no impact among Republicans. Highly educated Republicans were indeed less fearful of infection than other Republicans. These Republicans may have been somewhat less fearful because they were able to make better statistical estimates of their personal risk of infection.

The measurement and coding of education and party identification could also be construed as a limitation. I chose to recode education as a continuous variable and noted precedents for this recoding. An analysis with education as a categorical variable was also conducted, and no major differences were found. There are alternative ways to code education, such as years of education (continuous) or attainment of a college degree (dichotomous). Political psychological research by other scholars suggests that the effect of education is monotonic and education coding doesn't substantively change main and interaction effects (Federico, Deason, & Fisher, 2012, p. 386; Federico & Tagar, 2014, p. 591). Party identification can also be measured using a multiple-item scale that taps into facets of partisanship such as affective partisanship, negative partisanship, and voting behavior. Nevertheless, many studies of education's moderating effect use a single scale of party identification (e.g., Hamilton, 2011), and I believe the current scale suffices for the goal of replication.

Less educated Democrats may, on average, also have been relatively fearful because they are disproportionately African-American, and this population has less trust in the medical establishment. The current sample was 8.2% African-American. The subpopulation of Democrats with less than a high school education was 13.1% African-American, and the remainder of the sample was just 2.2% African-American. Evidence suggests that African

Americans' distrust the medical establishment due to a history of discrimination and maltreatment (Boulware, 2003; Corbie-Smith, Thomas, & St. George, 2002). They may have lacked confidence in the government's statements about EVD and may have predicted that public health agencies would fail to serve them.

As noted earlier, attitudes of highly educated Democrats toward quarantine policies and fear of infection matched the attitudes of public health professionals. In contrast, less educated Democrats and all Republicans in this study did not share those attitudes. This mismatch does not represent a public health failure, however. The response to EVD by the U.S. Government's Centers for Disease Control and Prevention (and other public health institutions) was successful. It terminated the deadliest EVD epidemic in history (Piot, Coltart, & Atkins, 2017). The aggregate results were also encouraging: the average respondent recognized that EVD was highly severe and correctly estimated a low likelihood of personally being infected.

Nevertheless, these results do suggest that U.S. residents who had traveled to affected countries and Africans from affected countries had become targets of unnecessary suspicion. Such suspicion is not necessarily maladaptive—psychological research shows that slightly excessive caution can be adaptive for survival (Johnson, Blumstein, Fowler, & Haselton, 2013). In future epidemics, public health communicators could craft messages that build confidence in screening procedures and lessen stigma toward travelers who have passed health screenings. Such messaging could help healthcare workers, who may feel unjustly punished for contributing to the epidemic response when they are stigmatized.

In aggregate, these results optimistically point toward the conclusion that highly educated people resemble public health professionals in their attitudes and assessments. However, in some cases, these results also pessimistically point to the attenuation of this effect among Republicans. This attenuation seems most likely to occur when negative emotions with an immediate target are salient. The mixed findings of this study also suggest that further replication attempts would be useful to delineate the conditions that cause asymmetric polarization.

Data Availability

For this study, a dataset is freely available (see the Supplementary Materials section).

Supplementary Materials

The following Supplementary Materials are available (for access see Index of Supplementary Materials below):

- Via the OSF repository: Data and codebook

- Via the PsychArchives repository: Measurement scales, primary regression tables, regression tables with knowledge as a covariate, regression tables with knowledge as a moderator, and results of a confirmatory factor analysis of the seven attitudes

Index of Supplementary Materials

Martin, C. C. (2019). *How education did (and did not) accentuate partisan differences during the Ebola outbreak of 2014-15* [Data and codebook]. OSF. https://osf.io/9mkz5/

Martin, C. C. (2019). *Supplementary materials to "How education did (and did not) accentuate partisan differences during the Ebola outbreak of 2014-15".* PsychOpen. https://doi.org/10.23668/psycharchives.2733

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