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Political Orientation Predicts Credulity Regarding Putative Hazards

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30 **Abstract**

31 To benefit from information provided by others, people must be somewhat credulous. However,

32 credulity entails risks. The optimal level of credulity depends on the relative costs of believing

33 misinformation versus failing to attend to accurate information. When information concerns

34 hazards, erroneous incredulity is often more costly than erroneous credulity, as disregarding

35 accurate warnings is more harmful than adopting unnecessary precautions. Because no

36 equivalent asymmetry characterizes information concerning benefits, people should generally be

37 more credulous of hazard information than of benefit information. This adaptive negatively-

38 biased credulity is linked to negativity bias in general, and is more prominent among those who

39 believe the world to be dangerous. Because both threat sensitivity and dangerous-world beliefs

40 differ between conservatives and liberals, we predicted that conservatism would positively

41 correlate with negatively-biased credulity. Two online studies of Americans support this

42 prediction, potentially illuminating the impact of politicians' alarmist claims on different

43 portions of the electorate.

44

45 Keywords: threat sensitivity; negativity bias; negatively-biased credulity; political orientation

1

46   In 2012, a liberal professor wrote that the Obama Administration was stockpiling

47   ammunition, preparing for totalitarian rule. This idea was ignored by liberals. In 2015,

48   conservative bloggers asserted that a military exercise aimed to occupy Texas and impose

49   martial law. Conservatives became so concerned that the Texas Governor ordered the State

50   Guard to monitor the exercise.

51   The different fates of these two conspiracy theories might simply reflect their historical

52   particulars. Whereas in 2012 liberal Americans largely approved of the Obama Administration,

53   in 2015 most conservative Americans did not. Perhaps the first theory died while the second

54   prospered simply because the latter resonated with the views of a substantial audience while the

55   former did not. However, two bodies of research suggest that psychological differences related

56   to political orientation may also have been at work. First, a sizeable literature documents that, in

57   the U.S., responsiveness to negative stimuli correlates with political orientation, with

58   conservatives displaying more responsiveness, and liberals displaying less. Second, recent

59   studies indicate that people are more credulous of information concerning hazards than of

60   information concerning benefits – and individuals differ in this regard. Here, we combine these

61   approaches, testing the hypothesis that political orientation is correlated with differences in

62   credulity toward hazard information. If correct, this thesis potentially illuminates the differential

63   impacts that politicians' alarmist claims have on liberal and conservative constituencies.

64   We employ the terms "liberal" and "conservative" recognizing that these are

65   heterogeneous categories, and that self-identifying members of each may hold internally

66   incompatible positions on various issues; we view these features as a source of noise, hence any

67   differences found despite them constitute foundational orientations shared by core groups of

68   category members (Weeden & Kurzban, 2016). Research has revealed psychological differences

69   between liberals and conservatives, including both broad features of personality (Carney, Jost,

70   Gosling, & Potter, 2008) and the priority given to different moral principles (Graham, Haidt, &

71   Nosek, 2009). Reviewing a large number of studies, Hibbing, Smith, and Alford (2014)

72   concluded that conservatives display greater "negativity bias" than do liberals (or, perhaps more

73   precisely, "threat bias" [Lilienfeld & Latzman, 2014], i.e., sensitivity to the possibility of

74   danger). Subsequent research has largely bolstered this conclusion (Ahn et al., 2014; Mills,

75   Smith, Hibbing, & Dodd, 2014; Mills et al., 2016; but see Knoll, O'Daniel, & Cusato, 2015).

76   Like other animals, humans exhibit negativity bias – compared to positive events,

77   negative events capture attention and information processing more readily, elicit strong emotions

78   more easily, and are more memorable (Rozin & Royzman, 2001; Baumeister, Bratslavsky,

79   Finkenauer, & Vohs, 2001). If valence indexes the biological fitness implications that a class of

80   events would have had in ancestral environments, then this pattern is explicable in evolutionary

81   terms as stemming from the generally greater detrimental fitness consequences of failing to

82   immediately attend to, address, and learn from fitness-reducing events compared to failing to do

83   so for fitness-enhancing events, as threats frequently both are more imminent than, and preclude,

84   opportunities (Rozin & Royzman, 2001; Baumeister et al., 2001). Within a species, the optimal

85   level of negativity bias will depend on the interaction of features of both the individual and the

86   environment (e.g., a vulnerable individual in a hazardous environment should be guided by

87   greater negativity bias than a robust individual in a safe environment, etc.) – there is no

88   invariantly "correct" degree of negativity bias. Consonant with this, there are substantial

89   individual differences in negativity bias. If a core dimension of political orientation is that

90   liberals value the opportunities afforded by change and cultural heterogeneity, whereas

91   conservatives value the safety of tradition and cultural homogeneity, then conservatism is more

92 consonant with pronounced negativity bias than is liberalism, as conservatives will often see

93 pitfalls where liberals see promise (Hibbing et al., 2014).

94   While the evolutionary considerations underlying negativity bias apply across species, in

95 humans they intersect with our reliance on cultural information. Our species uniquely exploits

96 cumulative cultural evolution and the technological and organizational advantages that it

97 provides – we are culture-dependent, a characteristic likely undergirded by specific

98 psychological mechanisms for acquiring cultural information (Fessler, 2006). Relying on

99 cultural information necessitates credulity, as the utility of a given practice is frequently not

100 evident to the learner, and is often opaque even to teachers (Boyd & Richerson, 2006).

101 However, those who are overly credulous risk acquiring erroneous information and/or being

102 exploited (Kurzban, 2007). The trade-off between the benefits of credulity and its costs varies as

103 a function of information type, such that the optimal level of credulity differs across different

104 messages. With regard to information concerning hazards, the costs of erroneous credulity will

105 often be lower than the costs of erroneous incredulity: while the former results in unnecessary

106 precautions, the latter can result in injury or death. (As these possibilities indicate, the extent of

107 the asymmetry in costs depends on the magnitude of the consequences should the information

108 prove accurate.) Because no equivalently overarching asymmetry exists with regard to

109 information concerning benefits, people should exhibit negatively-biased credulity, i.e., ceteris

110 paribus, they should more readily view as true information concerning hazards relative to

111 information concerning benefits (Fessler, Pisor, & Navarrete, 2014). Experimental results

112 confirm this – when statements are framed as being about hazards they are judged more likely to

113 be true than when they are framed as involving benefits (Fessler et al., 2014; see also Hilbig,

114 2009; Hilbig, 2012a; Hilbig, 2012b).

115   At the proximate level, negatively-biased credulity is explained by the greater processing

116   fluency attending negative information, thus linking negatively-biased credulity to negativity

117   bias in general (Hilbig, 2009; Hilbig, 2012a; Hilbig, 2012b). Given that conservatives display

118   greater threat sensitivity, and may display greater negativity bias, than do liberals, this proximate

119   pathway generates the prediction that conservatives will exhibit greater negatively-biased

120   credulity than liberals. This prediction is reinforced by additional conceptual and empirical

121   considerations.

122   Because newly-identified hazards often share features, and therefore co-occur, with

123   previously-known hazards, the more dangerous the world in which one lives, the more likely that

124   one will encounter additional hazards, and thus the greater the asymmetry between the costs of

125   erroneous credulity and those of erroneous incredulity when assessing information concerning

126   hazards. Accordingly, individuals who know (or believe they know) of the existence of many

127   hazards should display elevated negatively-biased credulity. This functionality is reinforced at

128   the proximate level, as congruence between a message and prior beliefs enhances biased

129   credulity (White, Pahl, Buehner, & Haye, 2003). Consonant with the above, belief that the world

130   is dangerous correlates positively with negatively-biased credulity (Fessler et al., 2014).

131   Importantly, in keeping with conservatives' view of tradition and cultural homogeneity as

132   buffers against an uncertain world, conservatism is linked with dangerous-world beliefs, both

133   directly and via associations with authoritarianism (Federico, Hunt, & Ergun, 2009; relatedly, see

134   Altemeyer, 1998; Crowson, Thoma, & Hestevold, 2005; Duckitt, 2001; Duckitt, Wagner, Du

135   Plessis, & Birum, 2002; van Leeuwen & Park, 2009; Lilienfeld & Latzman, 2014). Hence, if

136   conservatives view the world as more dangerous than do liberals, then conservatives should

137 display more negatively-biased credulity than liberals. To test this prediction, we measured

138 negatively-biased credulity and assessed political orientation in two U.S. samples.

139

140 **Study 1 Methods**

141 *Participants*

142 On the basis of variance observed in Fessler et al. (2014) Study 2, an approximate final

143 sample size of 450 was targeted. Expecting attrition and exclusions, in early October of 2015,

144 540 U.S. participants were recruited via MechanicalTurk.com in exchange for $0.50. Data were

145 pre-screened for minimal completeness (see below), repeat participation, taking at least 3

146 minutes to complete the study, speaking English as a first language, and answering "catch

147 questions" (descriptive statistics in Table S2a; predictors of exclusion reported in Table S3).

148 The final sample consisted of 472 adults (48% female; 81% White) ranging in age from 19 to 65

149 ($M = 36.03$, $SD = 11.81$).

150

151 *Materials and Procedure*

152 We created a credulity scale consisting of fourteen plausible but false statements, and two

153 true statements included to preclude deception (participants were informed that some of the

154 statements were factual). For each of eight domains, one statement concerned a benefit and one

155 concerned a hazard (e.g., "Eating carrots results in significantly improved vision," "Kale

156 contains thallium, a toxic heavy metal, that the plant absorbs from soil"; see SOM for complete

157 instrument). Participants reported judgments of truthfulness using 1-7 scales (1 = *I'm absolutely*

158 *certain this statement is FALSE; 7 = I'm absolutely certain this statement is TRUE*). As noted

159 earlier, the magnitude of the phenomenon addressed by a message should color credulity toward

160 it, as any asymmetry between the costs of erroneous credulity and erroneous incredulity will be a

161 function of the significance of the benefit or hazard at issue. Statements were therefore selected

162 so that, for a given domain, the presumed magnitudes of the benefit or hazard were

163 approximately equal; additionally, participants were asked to judge these magnitudes using a 1-7

164 scale (1 = *The benefit [hazard] described in this statement is SMALL; 7 = The benefit [hazard]*

165 *described in this statement is LARGE*). In cases of incomplete responses, if a participant left

166 fewer than 10% of the items unanswered, missing responses were imputed (see SOM, Appendix

167 3; see Table S5 for model fits without imputation). Statements were presented in truly random

168 order. To measure *bias* in credulity regarding hazard information relative to benefit information,

169 in the models reported in the main text we examine the difference between hazard credulity and

170 benefit credulity; the SOM presents complementary models respectively examining only hazard

171 credulity or only benefit credulity as the response (Tables S6a-b).

172   Next, political orientation was assessed using four measures. First, participants

173 completed a slightly updated form of Dodd et al.'s (2012) version of a Wilson and Patterson

174 (1968) issues index (see SOM) in which participants indicate whether they agree, disagree, or are

175 uncertain regarding 28 contemporary issues, half of which are favored by conservatives (e.g.,

176 "Biblical truth," "tax cuts"), and half of which are favored by liberals (e.g., "abortion rights,"

177 "socialism"). For each conservative topic, agreement was scored as +1 and disagreement as -1,

178 with reverse scoring for liberal topics; "uncertain" was scored as 0. With three exceptions (see

179 SOM Appendix 1), responses to all topics were summed such that increasingly positive values

180 indicate greater conservatism (α = .88). Second, using Dodd et al.'s social principles index

181 (minus one item concerning danger – see SOM), participants selected one of two completions of

182 the stem "Society works best when…" (e.g., "people are rewarded according to merit" versus

183   "people are rewarded according to need"). The choices are intended to capture preferences for

184   traditional social order, in-group favoritism, obedience to authority, and punishment of

185   transgressions. Typically conservative responses were coded as "1," typically liberal responses

186   were coded as "-1", then responses were summed such that larger values indicate greater

187   conservatism ($\alpha = .72$). All items and stem-completion options were presented in truly random

188   order. Any missing values were imputed if participants failed to answer less than 10% of these

189   measures (see Table S5 for fit without imputation). Third, participants indicated their political

190   position on a 9-point scale ("strongly liberal" = 1, "strongly conservative" = 9). Lastly,

191   participants reported their political party affiliation, scored as +1 for traditionally conservative

192   parties ("Republican", "Tea Party"), -1 for traditionally liberal parties ("Democrat", "Green"),

193   and 0 for Libertarians or unaffiliated individuals. Demographic items followed, including

194   parenthood status, as previous research (see Fessler, Holbrook, Pollack, & Hahn-Holbrook,

195   2014) suggests that parents may be more sensitive to the presence of hazards than non-parents.

196   Additionally, participant height and self-assessed fighting ability were collected for a future

197   study; exploratory analyses indicate these have no bearing on the results of interest here, hence

198   they are not reported. See SOM for complete survey.

199

200   **Study 1 Results**

201   To facilitate participant comprehension, in our credulity measure, for each item the low

202   end of the Likert-type scale is anchored by 1 ("I'm absolutely certain this statement is FALSE").

203   Our weighting procedure involves multiplying the participant's response on this scale by the

204   participant's assessment of the magnitude of the given hazard or benefit. Accordingly, to

205 preclude assigning a positive multiplicative product to items deemed entirely false by a

206 participant, we began by subtracting 1 from all credulity responses.

207   Because our four measures of political orientation had disparate ranges, we z-scored each

208 measure, performed a principal components analysis, and extracted the first component

209 (summarizing 72.65% of the variance, each measure having a loading of 0.80 or higher) as a

210 summary of political orientation, where higher values indicate greater conservatism. (An

211 alternative variable created by summing the four measures together produced similar results

212 when included in our models – see SOM Table S7.)

213   Employing the R statistical program version 3.3.1 (R Core Team, 2016), linear models

214 were fit with the difference between hazard credulity (weighted by the participant's perceived

215 magnitude for each respective item) and benefit credulity (similarly weighted) as the response.

216 Variables that exhibited skewness were rounded down to the 97.5th percentile if negatively

217 skewed, and up to the 2.5th percentile if positively skewed (see SOM Appendix 2). No models

218 exhibited collinearity, i.e., none exhibited a variance inflation factor greater than 3.

219   Although not significant, participants tended to find our (almost entirely false) weighted

220 credulity-scale items more believable if they concerned a hazard rather than a benefit ($M_{hazard} =$

221 12.28, $M_{benefit} = 11.96$, $t(934.51) = 1.02$, $p = .31$). A participant's average credulity toward

222 benefits was correlated with the participant's average credulity toward hazards, $r = .41$.

223   Addressing the key prediction at issue, participants who were more conservative were

224 significantly more likely to exhibit greater credulity for information about hazards relative to

225 information about benefits (Table 1), an effect independent of controls (Table S4). Treating

226 hazard credulity separately from benefit credulity confirms these results: conservatism has a

227 positive effect on hazard credulity, but no effect on benefit credulity (Tables S6a-b); this is true

228   even if we do not weight credulity by the participant's perceived magnitude of the hazard or

229   benefit described in each item (Table S8) or if we treat credulity for each item as a separate

230   response (and include a random intercept for each participant and item; Tables S9a-b). Likewise,

231   this effect is robust to the exclusion of any single item (see Figure S1). The relationship between

232   conservatism and negatively-biased credulity was driven predominantly by participants'

233   responses to the Wilson-Patterson issues index (Table 2a). More specifically, items from this

234   index addressing social conservatism predicted negatively-biased credulity; the effect of

235   conservative views on the military, obedience to authority, and punishment was in the same

236   direction, albeit not significant, while there was no effect of fiscal conservatism (Table 3; Figure

237   1a; see SOM Appendix 1 for the Wilson-Patterson issues index items by category).

238

239   *(TABLES 1-3 APPEAR ON THE FOLLOWING PAGES)*

Table 1. *Unstandardized Parameter Estimates, Standardized Parameter Estimates, 95% Confidence Intervals for Unstandardized Parameter Estimates, and P Values for Models with Political Summary Measure as a Predictor of the Difference between Weighted Hazard Credulity and Weighted Benefit Credulity.*

	Study 1					Study 2				
Variable	*Parm. Est.*	*Std. Est.*	*Lower 95%*	*Upper 95%*	*p*	*Parm. Est.*	*Std. Est.*	*Lower 95%*	*Upper 95%*	*p*
Intercept	-.27	.00	-2.09	1.54	.77	.63	.00	-1.25	2.52	.51
Polit. summ.	.36	.12	.08	.65	.01	.54	.19	.28	.81	.00

Study 1: $N = 472$. Adjusted $R^2 = .01$, $F(10, 461) = 1.66$, $p = .09$. Women, "other" ethnicity, some high school/high school diploma, and non-parents are held at zero. Age is centered such that the intercept represents age 19.

Study 2: $N = 476$. Adjusted $R^2 = .03$, $F(12, 463) = 2.09$, $p = .02$. Women, "other" ethnicity, some high school/high school diploma, and median general reasoning ability held at zero. Age is centered such that the intercept represents age 18. Parenthood status excluded for Study 2 due to large number of incompletes (see Table S10 for regression on the subset for which parenthood status was available, Study 2).

Table 2a.

Study 1: Unstandardized Parameter Estimates, Standardized Parameter Estimates, 95% Confidence Intervals for Unstandardized Parameter Estimates, and P Values for Models with Distinct Political Measures as Predictors of the Difference between Weighted Hazard Credulity and Weighted Benefit Credulity.

| | Wilson-Patterson Issues | | | | | Society Works | | | | | Political Likert | | | | | Political Category* | | | |
	Parm Est	Std Est	5% CI	95% CI	p	Parm Est	Std Est	5% CI	95% CI	p	Parm Est	Std Est	5% CI	95% CI	p	Parm Est	5% CI	95% CI	p
Variable																			
Intercept	.07	.00	-1.76	1.90	.94	.02	.00	-1.85	1.89	.98	-1.00	.00	-2.95	.95	.32	-.81	-2.69	1.07	.40
Issues	.09	.16	.04	.14	.00	---	---	---		---	---	---	---	---	---	---	---	---	---
Society	---	---	---	---	---	.09	.09	.00	.18	.05	---	---	---	---	---	---	---	---	---
Likert	---	---	---	---	---	---	---	---	---	---	.17	.07	-.05	.39	.13	---	---	---	---
Category:																			
Libert/Unaff	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	.74	-.34	1.83	.18
Conservat	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	.97	-.34	2.27	.15

$N = 472$. Wilson-Patterson Issues model: adjusted $R^2 = .02$, $F(10, 461) = 2.14$, $p = .02$. Society Works model: adjusted $R^2 = .01$, $F(10, 461) = 1.43$, $p = .17$. Political Likert model: adjusted $R^2 = .01$, $F(10, 461) = 1.27$, $p = .25$. Political Category model: adjusted $R^2 = .01$, $F(11, 460) = 1.20$, $p = .28$. *Standardized betas not provided for categorical variables.

Table 2b

Study 2: Unstandardized Parameter Estimates, Standardized Parameter Estimates, 95% Confidence Intervals for Unstandardized Parameter Estimates, and P Values for Models with Distinct Political Measures as Predictors of the Difference between Weighted Hazard Credulity and Weighted Benefit Credulity.

	Wilson-Patterson Issues					*Society Works*					*Political Likert*					*Political Category**			
	Parm	*Std*	*5%*	*95%*		*Parm*	*Std*	*5%*	*95%*		*Parm*	*Std*	*5%*	*95%*		*Parm*	*5%*	*95%*	
Variable	*Est*	*Est*	*CI*	*CI*	*p*	*Est*	*Est*	*CI*	*CI*	*p*	*Est*	*Est*	*CI*	*CI*	*p*	*Est*	*CI*	*CI*	*p*
Intercept	.89	.00	-.99	2.77	.35	.82	.00	-1.09	2.74	.40	-1.03	.00	-3.11	1.06	.34	-.35	-2.33	1.64	.73
Issues	.10	.22	.06	.15	.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Society	---	---	---	---	---	.12	.15	.05	.20	.00	---	---	---	---	---	---	---	---	---
Likert	---	---	---	---	---	---	---	---	---	---	.33	.14	.11	.54	.00	---	---	---	---
Category:																			
Libert/Unaff	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	.77	-.31	1.84	.16
Conservat	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1.74	.60	2.88	.00

$N = 476$. Wilson-Patterson Issues model: adjusted $R^2 = .04$, $F(12, 463) = 2.55$, $p = .003$. Society Works model: adjusted $R^2 = .01$, $F(12, 463) = 1.54$, $p = .11$. Political Likert model: adjusted $R^2 = .01$, $F(12, 463) = 1.49$, $p = .13$. Political Category model: adjusted $R^2 = .01$, $F(13, 462) = 1.37$, $p = .17$. *Standardized betas not provided for categorical variables.

Table 3. *Unstandardized Parameter Estimates, Standardized Parameter Estimates, 95% Confidence Intervals for Unstandardized Parameter Estimates, and P Values for Models with Social Conservatism, Fiscal Conservatism, and Military/Obedience/Punishment Conservatism as Predictors of the Difference between Weighted Hazard Credulity and Weighted Benefit Credulity.*

Variable	*Study 1*					*Study 2*				
	Parm. Est.	*Std. Est.*	*5% CI*	*95% CI*	*p*	*Parm. Est.*	*Std. Est.*	*5% CI*	*95% CI*	*p*
Intercept	-.44	.00	-2.25	1.37	.63	.51	.00	-1.38	2.41	.60
Social	.29	.11	.00	.58	.05	.33	.14	.07	.59	.01
Fiscal	.00	.00	-.38	.38	.99	.13	.04	-.22	.48	.46
Military	.23	.07	-.10	.56	.18	.24	.09	-.05	.53	.11

Study 1: $N = 472$. Adjusted $R^2 = .02$, $F(12, 459) = 1.78$, $p = .046$. Sub-scales of the Wilson-Patterson issues index (modified from Dodd et al., 2012), summarized by first principal component; see SOM for details.

Study 2: $N = 476$. Adjusted $R^2 = .04$, $F(14, 461) = 2.24$, $p = .006$. Sub-scales of the Wilson-Patterson issues index (modified from Dodd et al., 2012), summarized by first principal component; see SOM for details.
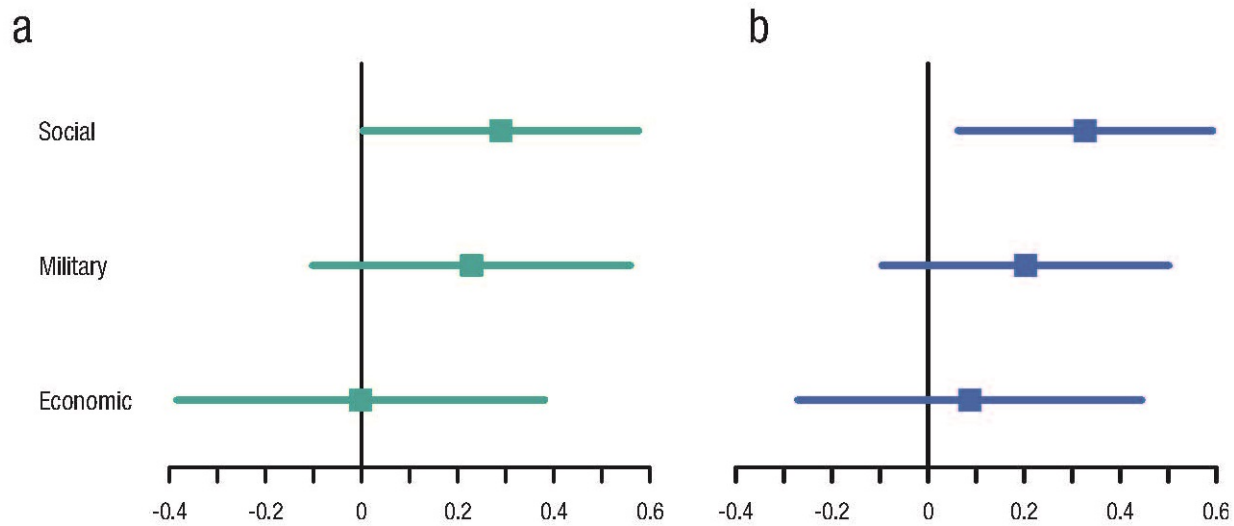
Fig. 1. Unstandardized parameter estimates with 95% confidence intervals for social, military, and fiscal conservatism for (a) Study 1 and (b) Study 2.

Discussion

241   Study 1 documented the predicted association between political orientation and

242 negatively-biased credulity. However, likely reflecting shortcomings of MechanicalTurk, the

243 sample suffered nontrivial data loss, and was not balanced as regards political orientation, being

244 skewed left. We therefore conducted a second study, recruiting participants via Prolific

245 Academic, an arguably superior online platform (Peer, Samat, Brandimarte, & Acquisti, 2015).

246 Study 2 also improved on Study 1 by replacing outdated military items ("Patriot Act", "Iraq

247 war") with contemporary topics (e.g., "Drone strikes," "Bomb cities controlled by terrorists").

248 To rule out the possibility that the pattern documented in Study 1 derives from differences in

249 general reasoning abilities (Kemmelmeier, 2008), we added short measures of problem-solving

250 and abstract reasoning (see SOM).

251

252 **Study 2 Methods**

253 *Participants*

254   In Study 2, in early September of 2016, 738 U.S. participants were recruited via Prolific

255 Academic in exchange for $2.31. Data were pre-screened for completeness, repeat participation,

256 taking at least 10 minutes to complete the study (the cutoff was extended from Study 1 due to the

257 addition of time-consuming measures of reasoning and problem-solving), speaking English as a

258 first language, and correctly answering "catch questions" (descriptive statistics in Table S2b;

259 predictors of exclusion reported in Table S3). As the sample evinced a left-skewed political

260 orientation, we randomly excluded participants who self-identified as more liberal (i.e., a 2 or

261 lower) on the 9-point political orientation scale until our sample approximated the distribution of

262 political orientations in the U.S. as documented in a Gallup poll conducted a few months prior to

263   our study (Jones & Saad, 2016). Results are robust to the exclusion or inclusion of these

264   individuals (see Table S11). The final sample consisted of 476 adults (40% female; 79% White)

265   ranging in age from 18 to 73 ($M = 34.32$, $SD = 12.56$).

266

267   ***Materials and Procedures***

268   Participants were presented with the same credulity scales described in Study 1.

269   Statements were presented in truly random order. Political orientation was assessed using the

270   four measures described in Study 1, with some minor modifications. As noted above, items

271   concerning U.S. military policy in Dodd et al.'s (2012) version of a Wilson and Patterson (1968)

272   issues index were updated (see SOM). With two exceptions (see SOM Appendix 1), responses

273   to all topics were summed; the scale had a high degree of internal consistency ($\alpha = .82$). Dodd et

274   al.'s social principles index (minus one item concerning danger – see SOM) again had high

275   internal consistency ($\alpha = .74$). This was followed by demographic items and measures of general

276   reasoning ability (see SOM for complete survey). Many participants failed to indicate whether

277   they were parents, so parenthood status is excluded from all models unless otherwise stated.

278

279   **Study 2 Results**

280   Because our four measures of political orientation had disparate ranges, we z-scored each

281   measure, performed a principal components analysis, and extracted the first component

282   (summarizing 73.90% of the variance, each having a loading of .77 or higher) as a summary of

283   political orientation, where higher values indicate greater conservatism. (An alternative variable

284   created by summing the four measures together produced similar results when included in our

285   models – see SOM Table S6.)

286   Linear models were fit with the difference between weighted hazard credulity and

287 weighted benefit credulity as the response. Variables that exhibited skewness were rounded

288 down to the 97.5th percentile if negatively skewed (see SOM Appendix 2). No models exhibited

289 collinearity.

290   Participants found weighted credulity-scale items significantly more believable if they

291 concerned a hazard rather than a benefit (M_{hazard} = 12.82, $M_{benefit}$ = 11.48, t = 4.03, p < .001). A

292 participant's average credulity toward benefits was correlated with the participant's average

293 credulity toward hazards, r = .48.

294   Addressing the key prediction at issue, participants who were more conservative were

295 again significantly more likely to exhibit greater credulity for information about hazards relative

296 to information about benefits (Table 1), an effect independent of the effects of controls (Table

297 S4); the same is true of the entire sample (i.e., when no highly liberal individuals are excluded) –

298 see Table S11. One item (concerning terrorism) had a large influence on hazard credulity.

299 Although exclusion of this item diminished the magnitude of the effect below significance, the

300 effect consistently remained in the same direction across multiple iterations of the model,

301 varying only slightly as a function of the set of liberals excluded (see Figure S1b). Treating

302 hazard credulity separately from benefit credulity corroborates the predicted relationship:

303 conservatism has a positive effect on hazard credulity, but no effect on benefit credulity (Tables

304 S6a-b; see Figure S2b for the varied effect of excluding the terrorism item); this is true even if

305 we do not weight credulity by the participant's perceived magnitude of the hazard or benefit

306 described in each item (Table S8) or if we treat credulity for each item as a separate response

307 (and include a random intercept for each participant and item; Tables S9a-b). As in Study 1, the

308 relationship between conservatism and negatively-biased credulity was driven predominantly by

18

309   participants' responses to the Wilson-Patterson issues index (Table 2b). Also as in Study 1, items

310   from this index addressing social conservatism predicted negatively-biased credulity, and, once

311   again, the effect of conservative views on the military, obedience to authority, and punishment,

312   was in the same direction though not significant, while fiscal conservatism again made no

313   notable contribution in this regard (Table 3; Figure 1b; see SOM Appendix 1 for the Wilson-

314   Patterson issues index items by category).

315

316   **General Discussion**

317   Because liberals and conservatives differ in responsiveness to negative information,

318   particularly concerning threats, and similarly differ in how dangerous they perceive the world to

319   be, we predicted, and found, that political orientation correlates with the tendency to believe

320   information about hazards relative to the tendency to believe information about benefits, with

321   liberals displaying less of this propensity and conservatives displaying more of it. This effect

322   was driven by political orientation as defined by views on social issues. These results contribute

323   to a corpus suggesting that, due to the intersection of variance in environments and variance in

324   individual capabilities, a variety of potentially viable strategies emerge, with some individuals

325   being more sensitive to the possibility of threats, and, correspondingly, paying higher

326   precautionary costs, and others being less sensitive to this possibility, and paying higher costs

327   when hazards are encountered.

328   While the predicted relationships are evident in our results, these findings should be

329   considered preliminary given that ours were not representative nationwide samples, and our

330   credulity measure consists of a small number of items. Indeed, its limited scope likely explains

331   why, although in Study 2 our novel measure produced the previously documented overarching

19

332   pattern of negatively-biased credulity, in Study 1 this pattern was nonsignificant, albeit in the

333   predicted direction. The same limitation may account for the outsized influence of one item on

334   the key results of Study 2.

335   Because older individuals display less negativity bias than younger individuals (Reed,

336   Chan, & Mikels, 2014), yet are generally more conservative (Cornelis, Van Hiel, Roets, &

337   Kossowska, 2009), some have questioned the relationship between negativity bias and

338   conservatism (Sedek, Kossowska, & Rydzewska, 2014). While our data do not resolve this,

339   examining wide age ranges, we find no interaction between political orientation and age in

340   predicting negatively-biased credulity (SOM Table S13; Figure S2). Rather, we find an effect of

341   political orientation even when age is controlled for (Tables 1-3, Table S4), suggesting

342   independent effects.

343   Social conservatism, but not fiscal conservatism, predicts increased negatively-biased

344   credulity. Whereas fiscal conservatism is orthogonal to individuals' exposure to hazards,

345   adherence to what are seen as tried-and-true rules for social organization and personal

346   comportment – the foundations of social conservatism – is, for its proponents, a defense against

347   disorder and danger; correspondingly, social conservatism correlates with threat-relevant

348   personality features differentiating liberals and conservatives, but fiscal conservatism does not

349   (Carney, Jost, Gosling, & Potter, 2008). Although in our models negatively-biased credulity is

350   not predicted by conservative views on the military, obedience to authority, and endorsement of

351   punishment (all of which concern avenues for enhancing stability and safety), consonant with the

352   above reasoning, the magnitude of the association between this characteristic and negatively-

353   biased credulity does not differ greatly from that of social conservatism (see Figure 1). Future

354   work should therefore further examine the impact of this attribute on negatively-biased credulity.

355   The difference in negatively-biased credulity that we document likely interdigitates with

356   related phenomena. Consonant with negatively-biased credulity, people judge those providing

357   information about hazards as more competent than those providing other information (Boyer &

358   Parren, 2015); our findings suggest that conservatives will display this pattern more than liberals.

359   A parallel bias exists in information transmission, as people are more likely to transmit messages

360   concerning hazards than messages concerning benefits (Altshteyn, 2014; Bebbington, MacLeod,

361   Ellison, & Fay, in press; but see Stubbersfield, Tehrani, & Flynn, 2015). Political orientation

362   likely shapes this bias also, potentially influencing the speed and breadth of dissemination of

363   messages as a function of the political composition of a social network. A variety of phenomena

364   thus link to negatively-biased credulity in a manner suggesting that politicians' alarmist claims

365   will differentially impact liberals and conservatives.

366   In the 2016 U.S. election, President-elect Donald Trump enjoyed support from social

367   conservatives despite being a recent convert to their positions; displaying limited familiarity with

368   their scriptures; and having boasted of violating one of their commandments. While this support

369   may have largely derived from, for example, Mr. Trump's opposition to abortion, the

370   relationship between political orientation and negatively-biased credulity suggests that social

371   conservatives may also have been influenced by his alarmist rhetoric, finding plausible such

372   readily falsifiable claims as his August 29, 2016 tweet that "Inner-city crime is reaching record

373   levels". Similarly, while it is difficult to gauge the effect of fake news on the election, the

374   credence given by social conservatives to bogus reports of nefarious conspiracies apparently

375   explains why profit-minded purveyors of fake news disproportionately targeted conservative

376   audiences (Sydell, 2016). More broadly, although distinguishing between Chicken Little and

377   Cassandra is frequently difficult – with grave perils attending mistakes on both sides – it seems

21

378 that social conservatives may be more apt to follow the former into the fox's den than they are to

379 disregard the latter and witness the fall of Troy.

380

386

391

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Supplementary Online Materials

to accompany

Political Orientation Predicts Credulity Regarding Putative Hazards

Daniel M.T. Fessler, Anne C. Pisor, and Colin Holbrook

The complete dataset, list of variables, and analytic code employed in this project are archived at osf.io/qqq82 and http://escholarship.org/uc/item/82j5p9r3

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Figure S2. The estimated effect of political orientation on hazard credulity with the terrorism item excluded

Figure S3a,b. LOESS fit of weighted hazard credulity by age

(Credulity Index)

(Each item was presented on a single web page, and the order of items was randomized)

Below are a series of statements collected from the media. Some of these statements are true, and some of them are false. For each of the statements, please indicate, by checking the appropriate box, how confident you are that the statement is true or false. Also, for each of the statements, please indicate how significant you think the things described in the statement are. Please note that your answers to each of these two questions should be independent of each other. For example, you might decide that you're absolutely certain that a statement is true, and select 7 for this question, but also feel that the risk described in the statement is small, and select 1 for this question.

1. Storing batteries in a refrigerator or freezer will improve their performance.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7

I'm absolutely certain this statement is **FALSE**

I'm absolutely certain this statement is **TRUE**

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7

The benefit described in this statement is **SMALL**

The benefit described in this statement is **LARGE**

2. Cell phones damage credit card magnetic strips, making them unusable.

☐   ☐   ☐   ☐   ☐   ☐   ☐

1   2   3   4   5   6   7

I'm absolutely certain this statement is **FALSE**   I'm absolutely certain this statement is **TRUE**

☐   ☐   ☐   ☐   ☐   ☐   ☐

1   2   3   4   5   6   7

The risk described in this statement is **SMALL**   The risk described in this statement is **LARGE**

---

3. Eating carrots results in significantly improved vision.

☐   ☐   ☐   ☐   ☐   ☐   ☐

1   2   3   4   5   6   7

I'm absolutely certain this statement is **FALSE**   I'm absolutely certain this statement is **TRUE**

☐   ☐   ☐   ☐   ☐   ☐   ☐

1   2   3   4   5   6   7

The benefit described in this statement is **SMALL**   The benefit described in this statement is **LARGE**

4. Kale contains thallium, a toxic heavy metal, that the plant absorbs from soil.

☐ ☐ ☐ ☐ ☐ ☐ ☐

1   2   3   4   5   6   7

I'm absolutely certain this statement is **FALSE**

I'm absolutely certain this statement is **TRUE**

☐ ☐ ☐ ☐ ☐ ☐ ☐

1   2   3   4   5   6   7

The risk described in this statement is **SMALL**

The risk described in this statement is **LARGE**

5. Exercising on an empty stomach burns more calories.

☐ ☐ ☐ ☐ ☐ ☐ ☐

1   2   3   4   5   6   7

I'm absolutely certain this statement is **FALSE**

I'm absolutely certain this statement is **TRUE**

☐ ☐ ☐ ☐ ☐ ☐ ☐

1   2   3   4   5   6   7

The benefit described in this statement is **SMALL**

The benefit described in this statement is **LARGE**

6. Long-distance running causes osteoarthritis of the knees.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7

I'm absolutely certain this statement is **FALSE**

I'm absolutely certain this statement is **TRUE**

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7

The risk described in this statement is **SMALL**

The risk described in this statement is **LARGE**

7. Selecting credit cards that have a low credit limit improves one's credit score.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7

I'm absolutely certain this statement is **FALSE**

I'm absolutely certain this statement is **TRUE**

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7

The benefit described in this statement is **SMALL**

The benefit described in this statement is **LARGE**

8. Hotel room keycards are often encoded with personal information that can be read by thieves.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7

I'm absolutely certain this statement is **FALSE**

I'm absolutely certain this statement is **TRUE**

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7

The risk described in this statement is **SMALL**

The risk described in this statement is **LARGE**

9. People who own cats live longer than people who don't.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7

I'm absolutely certain this statement is **FALSE**

I'm absolutely certain this statement is **TRUE**

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7

The benefit described in this statement is **SMALL**

The benefit described in this statement is **LARGE**

10. Sharks pose a significant risk to beachgoers.

☐ ☐ ☐ ☐ ☐ ☐ ☐
1   2   3   4   5   6   7

I'm absolutely   I'm absolutely

certain this   certain this

statement is **FALSE**   statement is **TRUE**

☐ ☐ ☐ ☐ ☐ ☐ ☐
1   2   3   4   5   6   7

The risk   The risk

described in this   described in this

statement is **SMALL**   statement is **LARGE**

11. Stockwood, California is one of the safest cities in the U.S.

☐ ☐ ☐ ☐ ☐ ☐ ☐
1   2   3   4   5   6   7

I'm absolutely   I'm absolutely

certain this   certain this

statement is **FALSE**   statement is **TRUE**

☐ ☐ ☐ ☐ ☐ ☐ ☐
1   2   3   4   5   6   7

The benefit   The benefit

described in this   described in this

statement is **SMALL**   statement is **LARGE**

12. Terrorist attacks in the U.S. have increased since Sept 11, 2001.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7

I'm absolutely   I'm absolutely

certain this   certain this

statement is **FALSE**   statement is **TRUE**

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7

The risk   The risk

described in this   described in this

statement is **SMALL**   statement is **LARGE**

13. When flying on major airlines, you are more likely to be upgraded from economy to business class if you ask at the gate.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7

I'm absolutely   I'm absolutely

certain this   certain this

statement is **FALSE**   statement is **TRUE**

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7

The benefit   The benefit

described in this   described in this

statement is **SMALL**   statement is **LARGE**

14. An intoxicated passenger could partially open the exit door on a commercial jetliner, causing the cabin to depressurize and the oxygen masks to deploy.

☐   ☐   ☐   ☐   ☐   ☐   ☐

1   2   3   4   5   6   7

I'm absolutely   I'm absolutely

certain this   certain this

statement is **FALSE**   statement is **TRUE**

☐   ☐   ☐   ☐   ☐   ☐   ☐

1   2   3   4   5   6   7

The risk   The risk

described in this   described in this

statement is **SMALL**   statement is **LARGE**

---

15. In a thunderstorm, a hard-topped car can offer protection from lightning, as long as the occupants do not touch metal inside the car.

☐   ☐   ☐   ☐   ☐   ☐   ☐

1   2   3   4   5   6   7

I'm absolutely   I'm absolutely

certain this   certain this

statement is **FALSE**   statement is **TRUE**

☐   ☐   ☐   ☐   ☐   ☐   ☐

1   2   3   4   5   6   7

The benefit   The benefit

described in this   described in this

statement is **SMALL**   statement is **LARGE**

16. In the U.S., an average of 32 people are killed by lightning each year.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7

I'm absolutely
certain this
statement is **FALSE**

I'm absolutely
certain this
statement is **TRUE**

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7

The risk
described in this
statement is **SMALL**

The risk
described in this
statement is **LARGE**

In the following sections, please tell us about yourself.

Your gender:

__ Female

__ Male

Your age: ___

How many letters are in the English alphabet? ___

(Study 1: Wilson-Patterson Issues Index – modified from Dodd et al. [2012])

Please indicate whether you agree or disagree, or are uncertain, with regard to each topic listed below:

1. school prayer: __ agree   __disagree   __uncertain
2. pacifism: __ agree   __disagree   __uncertain
3. socialism: __ agree   __disagree   __uncertain
4. pornography: __ agree   __disagree   __uncertain
5. illegal immigration: __ agree __disagree   __uncertain
6. women's equality: __ agree   __disagree   __uncertain
7. death penalty: __ agree   __disagree   __uncertain
8. The Patriot Act: __ agree   __disagree   __uncertain
9. premarital sex: __ agree   __disagree   __uncertain
10. gay marriage: __ agree   __disagree   __uncertain
11. abortion rights: __ agree   __disagree   __uncertain
12. evolution: __ agree   __disagree   __uncertain
13. patriotism: __ agree   __disagree   __uncertain
14. Biblical truth: __ agree   __disagree   __uncertain
15. 2003 Iraq invasion[1]: __ agree __disagree   __uncertain
16. welfare spending: __ agree   __disagree   __uncertain
17. tax cuts: __ agree   __disagree   __uncertain
18. gun control: __ agree __disagree   __uncertain
19. military spending: __ agree   __disagree   __uncertain
20. warrantless searches: __ agree   __disagree   __uncertain
21. globalization: __ agree   __disagree   __uncertain
22. pollution control: __ agree   __disagree   __uncertain
23. small government: __ agree   __disagree   __uncertain
24. school standards: __ agree   __disagree   __uncertain
25. foreign aid: __ agree __disagree   __uncertain
26. free trade: __ agree __disagree   __uncertain
27. obedience to authorities[2]: __ agree __disagree   __uncertain
28. compromise with enemies[3]: __ agree __disagree   __uncertain
29. charter schools[4]: __ agree   __disagree   __uncertain

[1] *Modified from Dodd et al.'s original "Iraq"*

[2] *Modified from Dodd et al's original "obedience"*

[3] *Modified from Dodd et al.'s original "compromise"*

[4] *Replaces Dodd et al.'s original "school standards"*

(Study 2: Wilson-Patterson Issues Index – modified from Dodd et al. [2012])

Please indicate whether you agree or disagree, or are uncertain, with regard to each topic listed below:

1. school prayer: __ agree   __disagree   __uncertain
2. pacifism: __ agree   __disagree   __uncertain
3. socialism: __ agree   __disagree   __uncertain
4. pornography: __ agree   __disagree   __uncertain
5. illegal immigration: __ agree __disagree   __uncertain
6. women's equality: __ agree   __disagree   __uncertain
7. death penalty: __ agree   __disagree   __uncertain
8. use nuclear weapons against threats to the U.S.[1]: __ agree   __disagree   __uncertain
9. premarital sex: __ agree   __disagree   __uncertain
10. gay marriage: __ agree   __disagree   __uncertain
11. abortion rights: __ agree   __disagree   __uncertain
12. evolution: __ agree   __disagree   __uncertain
13. patriotism: __ agree   __disagree   __uncertain
14. Biblical truth: __ agree   __disagree   __uncertain
15. bomb cities controlled by terrorists[1]: __ agree   __disagree   __uncertain
16. welfare spending: __ agree   __disagree   __uncertain
17. tax cuts: __ agree   __disagree   __uncertain
18. waterboarding terror suspects[2]: __ agree   __disagree   __uncertain
19. gun control: __ agree __disagree   __uncertain
20. military spending: __ agree   __disagree   __uncertain
21. warrantless searches: __ agree   __disagree   __uncertain
22. globalization: __ agree   __disagree   __uncertain
23. pollution control: __ agree   __disagree   __uncertain
24. small government: __ agree   __disagree   __uncertain
25. charter schools[1]: __ agree   __disagree   __uncertain
26. foreign aid: __ agree __disagree   __uncertain
27. free trade: __ agree   __disagree   __uncertain
28. drone strikes[2]: __ agree   __disagree   __uncertain
29. obedience to authorities[3]: __ agree   __disagree   __uncertain
30. compromise with enemies[4]: __ agree __disagree   __uncertain

[1] *Modified from Dodd et al.'s original to increase relevance to contemporary politics*
[2] *Added to increase relevance to contemporary politics*
[3] *Modified from Dodd et al's original "obedience"*
[4] *Modified from Dodd et al.'s original "compromise"*

(Social Principles Index – slightly modified* from Dodd et al. [2012])

Please tell us your opinions regarding how society works best by selecting one of the two options in each of the following statements:

Society works best when...

1-People live according to traditional values

2-People adjust their values to fit changing circumstances

Society works best when...

1-Behavioral expectations are based on an external code

2-Behavioral expectations are allowed to evolve over the decades

Society works best when...

1-Our leaders stick to their beliefs regardless

2-Our leaders change positions whenever situations change

Society works best when...

1-We take care of our own people first

2-We realize that people everywhere deserve our help

Society works best when...

1-Those who break the rules are punished

2-Those who break the rules are forgiven

Society works best when...

1-Every member contributes

2-More fortunate members sacrifice to help others

Society works best when...

1-People are rewarded according to merit

2-People are rewarded according to need

Society works best when...

1-People take primary responsibility for their welfare

2-People join together to help others

Society works best when...

1-People are proud they belong to the best society there is

2-People realize that no society is better than any other

Society works best when...

1-Our leaders are obeyed

2-Our leaders are questioned

Society works best when...

1-Our leaders call the shots

2-Our leaders are forced to listen to others

Society works best when...

1-People recognize the unavoidable flaws of human nature

2-People recognize that humans can be changed in positive ways

Society works best when...

1-Our leaders compromise with their opponents in order to get things done

2-Our leaders adhere to their principles no matter what

* Because it directly addresses belief in a dangerous world, the following item from Dodd et al.'s

original measure was omitted from the survey:

Society works best when...

1-People realize the world is dangerous

2-People assume all those in faraway places are kindly

How would you rate your overall political orientation?

o   o   o   o   o   o   o   o   o

Extremely   Moderate   Extremely

Liberal   Conservative

Please select the term that best describes your political affiliation:

__Republican

__Democratic

__Tea Party

__Libertarian

__Green

__Other (please indicate) _____

__None / not affiliated with any political party

Do you consider yourself an American?

- Yes
- Somewhat
- No

Is English your first language?

- Yes
- No

Your ethnicity:

- African-American
- Asian
- Hispanic / Latin American
- Middle Eastern
- Pacific Islander
- South Asian / Indian
- White
- More than one
- Other

Annual household income:

- under $20,000
- $20 - $30,000
- $30 - $40,000
- $40 - $50,000
- $50 - $60,000
- $60 - $70,000
- $70 - $80,000
- $80 - $90,000
- $90 - $100,000
- $100 - $110,000
- $110 - $120,000
- $120 - $130,000
- $130 - $140,000
- $140 - $150,000
- $150 - $160,000
- $170 - $180,000
- $180 - $190,000
- $190 - $200,000
- $200 - $210,000
- $210 - $220,000
- $220 - $230,000
- $230 - $240,000
- $240 - $250,000
- $250 - $260,000
- $260 - $270,000
- $270 - $280,000
- $280 - $290,000
- $290 - $300,000
- over $300,000

Education:

- Middle school or less
- Some High School
- High School Graduate
- Some college
- AA degree
- College graduate
- Some graduate school
- Master's degree
- Advanced degree (e.g., Ph.D.)

How many letters are in the word "obligatory"?   _____

What is your height, to the nearest half-inch?

      Feet: _____   Inches: _____

(Study 1) How surprised would you be to see someone eat lunch in the afternoon?

   o   o   o   o   o   o   o   o   o

Not surprised   Extremely

  at all   surprised

Are you a parent?

- Yes
- No

(Study 1: Yes →) **Please answer the following questions about your family.**

(Study 1) Are you currently raising a baby in your home?

- Yes
- No

(Study 1) How many girls have you had? _____

(Study 1) How many boys have you had?   _____

(Study 1) How many girls have you personally raised?   _____

(Study 1) How many boys have you personally raised?   _____

(Study 1) How old were you when had your first child?   _____

(Study 1) How old is your YOUNGEST child, in years? (If an infant, please specify that you are answering in months, e.g., "8 months"):   _____

(Study 1) What is the gender of your YOUNGEST child?   _____

(Study 1) How old is your OLDEST child, in years?   _____

(Study 1) If you have only had one child, please type "NA": What is the gender of your OLDEST child?   _____

Appendix 1. Categories of conservatism based on a modified version of Dodd et al.'s (2012)

Wilson-Patterson issues index.

For Study 1, we sorted 25 of 28 items from the modified Wilson-Patterson issues index into three

types of conservatism:

Social conservatism: school prayer, pornography, illegal immigration, women's equality,

      premarital sex, gay marriage, abortion rights, evolution, biblical truth, gun control

Economic conservatism: socialism, welfare spending, tax cuts, globalization, pollution control,

small government, foreign aid

Military, obedience, and punishment conservatism: pacifism, death penalty, Patriot Act,

      patriotism, the 2003 Iraq invasion, military spending, obedience, compromise

We omitted items concerning free trade and charter schools (our modification to the school

standards item), as neither discriminated between liberals and conservatives. An item concerning

warrantless search was also omitted as it did not load onto any of the three categories described

above.

For Study 2, we removed the Iraq invasion question as its continuing relevance is questionable,

but added other items intended to gauge international military involvement. We sorted 26 of 30

items from the modified Wilson-Patterson issues index into three types of conservatism:

<u>Social conservatism</u>: school prayer, pornography, illegal immigration, women's equality,

    premarital sex, gay marriage, abortion rights, evolution, biblical truth, gun control

<u>Fiscal conservatism</u>: socialism, welfare spending, tax cuts, globalization, pollution control, small

    government, foreign aid

<u>Military, obedience, and punishment conservatism</u>: pacifism, death penalty, Patriot Act,

    patriotism, military spending, obedience, compromise, use nuclear weapons against

    threats to the U.S., bomb cities controlled by terrorists, waterboarding terror suspects,

    drone strikes

We omitted items concerning free trade and globalization, as neither discriminated between liberals and conservatives.

    We summarized each of the three above categories using principal components analysis. For Study 1, the social conservatism principal component summarized 43.68% of the variance with variable loadings between .39-.80, the economic conservatism principal component summarized 33.42% of the variance with variable loadings between .40-.72, and the military/obedience/punishment conservatism principal component summarized 35.63% of the variance with variable loadings between .45-.68. For Study 2, the social conservatism principal component summarized 45.55% of the variance with variable loadings between .28-.82, the economic conservatism principal component summarized 35.82% of the variance with variable loadings between .41-.71, and the military/obedience/punishment conservatism principal component summarized 37.34% of the variance with variable loadings between .45-.72.

Appendix 2. Addressing outliers

When exploratory data analysis revealed outliers, these points were rounded up or down to lower their influence on model fit. In Study 1, extreme positive values for participant age, income, education, social conservatism, and the Wilson-Patterson issues index were rounded down to the 97.5[th] percentile (i.e., ages rounded to 65, income rounded to the 15th increment ($160,000), advanced degrees lumped with some advanced degree study, social conservatism rounded to 5, and Wilson-Patterson rounded to 17). Very low values for education, i.e., five individuals who had not completed high school, were lumped with high school graduates. Likewise, in Study 2, 3 individuals who had not completed high school were lumped with high school graduates, and 7 individuals with a doctoral degree were lumped with master's degree recipients. We also rounded down participants with the highest incomes to the 97.5[th] percentile (income increment 18, or incomes larger than $200,000 annually) and rounded up participants with the lowest Raven's matrices and Wonderlic scores to the 2.5[th] percentile (-2.23 and -1.90 standard deviations, respectively).

Appendix 3. Imputation, random seeds, and random culling in Study 2

Missing values were imputed for participants who failed to respond to less than 10% of the credulity items, less than 10% of the issues items, and less than 10% of the social principles index; values were also imputed for participants who failed to provide their political orientation (Study 1 $n = 3$, Study 2 $n = 0$), political category (Study 1 $n = 3$, Study 2 $n = 6$), income (Study 1 $n = 1$, Study 2 $n = 5$), or education (Study 1 $n = 7$, Study 1 $n = 1$). Imputation was performed via predictive mean matching (Van Buuren and Groothuis-Oudshoorn, 2011): in this approach, given all participants' responses, the function generates a mean prediction for one participant's missing value (Little, 1988). Imputation was performed five times for each missing value and the mean of these five imputations kept as the final value. Participants with imputed values are included in all models except in the model reported in Table S5. Predictive mean matching relies on a random number generator. We initialize the generator with five different seed values. Results reported were generated using the third seed. In Study 2, we randomly eliminate participants to achieve a sample that is approximately nationally representative in terms of social political orientation (Jones and Saad, 2016). We perform this process five times, and note where results were altered by the sample selected.

Table S1a. Study 1: descriptive statistics.

Variable	Mean	SD	Median	Min	Max	N	% level 1	% level 2	% level 3	% level 4	% level 5	Notes
Credulity difference	.28	5.34	.13	-17.38	15.63	449						Weighted avg. hazards - weighted avg. benefits
Wtd. avg. hazard credulity	12.30	5.07	11.69	1.00	29.63	456						Weighted by centrists' perceived hazardousness
Wtd. avg. benefit credulity	11.98	4.63	11.50	1.75	27.63	463						Weighted by centrists' perceived beneficialness
Cred. difference (unweighted)	-.19	.85	-.25	-2.88	2.38	459						Avg. hazards - avg. benefits
Political summary	.00	1.70	-.31	-2.87	4.51	472						Principal component of the four politics measures
Pol. summary (Non-PCA)	.01	3.43	-.69	-5.64	8.89	444						Summary of the four politics measures
"Society works best"	-3.45	5.46	-3.00	-13.00	13.00	466						Positive values more conservative
Political Likert	3.99	2.20	4.00	1.00	9.00	471						1 = extremely liberal 9 = extremely conservative
Political category	NA	NA	.00	NA	NA	469	.49	.32	.19			1=liberal party 2=libertarian or unaffiliated 3=conservative party
Wilson-Patterson index	-5.21	9.80	-6.00	-25.00	16.68	454						Positive values more conservative
Social conservatism	-.01	2.06	-.70	-2.20	5.03	472						Principal component of sub-measure of Wilson-Patterson index
Fiscal	.00	1.53	-.04	-2.85	3.89	472						Principal component of

												Patterson index
Military conservatism	.00	1.69	.00	-3.51	3.51	472						Principal component of sub-measure of Wilson-Patterson index
Age	17.03	11.81	14.00	.00	46.00	472						Given in years
Income	3.78	3.57	3.00	.00	14.00	471						
Sex	NA	NA	2.00	NA	NA	472	.48	.52				1=female, 2=male
Ethnicity	NA	NA	2.00	NA	NA	472	.19	.81				1=other, 2=white
Education	NA	NA	4.00	NA	NA	465	.15	.09	.36	.26	.14	1=high school, 2=some college, 3=associate's, 4=bachelor's, 5=at least some advanced degree
Parenthood	NA	NA	1.00	NA	NA	472	.61	.39				1=no, 2=yes. 3=no reply

Note. Imputed values are not reported here.

Table S1b. Study 2: descriptive statistics for subsample excluding randomly omitted liberals.

Variable	Mean	SD	Median	Min	Max	N	% level 1	% level 2	% level 3	% level 4	% level 5	% level 6	Notes
Credulity difference	1.24	4.96	1.13	-12.88	22.13	451							Weighted avg. hazards - weighted avg. benefits
Wtd. avg. hazard credulity	12.67	5.21	12.25	1.88	34.63	461							Weighted by centrists' perceived hazardousness
Wtd. avg. benefit credulity	11.46	4.59	11.00	1.63	33.00	466							Weighted by centrists' perceived beneficialness
Cred. difference (unweighted)	-.02	.82	.00	-2.25	3.88	465							Avg. hazards - avg. benefits
Political Summary	.00	1.73	-.16	-3.57	3.97	476							Principal component of the four politics measures
Pol. summary (Non-PCA)	.02	3.48	-.24	-7.02	7.81	450							Summary of the four politics measures
"Society works best"	-2.00	5.86	-3.00	-13.00	13.00	467							Positive values more conservative
Political Likert	4.98	2.14	5.00	1.00	9.00	476							1 = extremely liberal 9 = extremely conservative
Political category	NA	NA	.00	NA	NA	470	.36	.36	.29				1=liberal party 2=libertarian or unaffiliated 3=conservative party
Wilson-Patterson index	-2.93	10.47	-4.00	-25.00	22.00	463							Positive values more conservative
Social conservatism	.00	2.14	-.92	-2.28	5.45	476							Principal component of sub-measure of Wilson-Patterson index
Fiscal conservatism	.00	1.60	.01	-3.52	3.35	476							Principal component of sub-measure of Wilson-Patterson index
Military conservatism	.00	1.82	-.02	-4.05	3.38	476							Principal component of sub-measure of Wilson-

Variable	Mean	SD	Median	Min	Max	N	%	%	%	%	%	Patterson index
Raven's test	.02	.96	.16	-2.13	1.31	469						Correct - incorrect
Wonderlic test	.01	.98	.08	-2.00	1.50	464						Correct - incorrect
Age	34.32	12.47	31.00	18.00	73.00	476						Given in years
Income	4.60	4.07	4.00	.00	17.00	471						
Sex	NA	NA	2.00	NA	NA	476	.40	.60				1=female, 2=male
Ethnicity	NA	NA	2.00	NA	NA	476	.21	.79				1=other, 2=white
Education	NA	NA	4.00	NA	NA	475	.10	.28	.08	.35	.04	.14	1=high school, 2=some college, 3=associate's, 4=bachelor's, 5=at least some advanced degree. 6 = advanced degree
Parenthood	NA	NA	1.00	NA	NA	380	.59	.41				1=no, 2=yes. 3=no reply

Note. Imputed values are not reported here.

Table S2a. Study 1: descriptive statistics for participants excluded from analyses.

Variable	*Mean*	*SD*	*Median*	*Min*	*Max*	*N*	%	%	%	%	%	Notes

							level 1	level 2	level 3	level 4	level 5	
Credulity difference	-.46	4.23	-1.38	-9.00	8.25	37						Weighted avg. hazards - weighted avg. benefits
Wtd. avg. hazard credulity	11.71	4.55	12.44	3.75	21.00	38						Weighted by centrists' perceived hazardousness
Wtd. avg. benefit credulity	12.01	4.03	12.00	1.50	19.25	42						Weighted by centrists' perceived beneficialness
Cred. difference (unweighted)	-.28	.71	-.25	-1.88	1.00	37						Avg. hazards - avg. benefits
Political PCA	.02	1.01	.00	-2.84	3.27	65						Principal component of the following four measures
Pol. summary (Non-PCA)	-.04	2.59	.35	-5.45	5.47	30						Summary of the four politics measures
"Society works best"	-3.87	4.75	-3.00	-13.00	7.00	30						Positive values more conservative
Political Likert	3.94	1.85	4.00	1.00	8.00	32						1 = extremely liberal 9 = extremely conservative
Political category	NA	NA	.00	NA	NA	32	.28	.50	.22			1=liberal party 0=libertarian or unaffiliated 3=conservative party
Wilson-Patterson index	-6.20	7.95	-7.50	-19.00	16.78	36						Positive values more conservative
Social conservatism	-.01	1.49	.00	-2.26	5.18	65						Principal component of sub-measure of Wilson-Patterson index
Fiscal conservatism	-.05	1.19	.00	-2.90	4.09	65						Principal component of sub-measure of Wilson-Patterson index
Military conservatism	-.18	1.15	.00	-2.31	2.87	65						Principal component of sub-measure of Wilson-Patterson index

Age	32.32	10.42	12.00	19.00	64.00	37					Given in years
Income	3.86	4.10	2.00	.00	14.00	29					
Sex	NA	NA	2.00	NA	NA	37	.43	.57			1=female, 2=male
Ethnicity	NA	NA	2.00	NA	NA	32	.44	.56			1=other, 2=white
Education	NA	NA	4.00	NA	NA	30	.13	.37	.03	.37	.10	1=high school, 2=some college, 3=associate's, 4=bachelor's, 5=at least some advanced degree
Parenthood	NA	NA	1.00	NA	NA	33	.70	.30			1=no 2=yes 3=no reply

Note. Imputed values are not reported here.

Table S2b. Study 2: descriptive statistics for participants excluded from analysis (prior to exclusion of liberals or centrists).

Variable	Mean	SD	Median	Min	Max	N	% level 1	% level 2	% level 3	% level 4	% level 5	% level 6	Notes
Credulity difference	.75	5.36	0.63	-11.13	15.38	53							Weighted avg. hazards - weighted avg. benefits
Wtd. avg. hazard credulity	12.84	4.94	12.63	5.00	30.00	53							Weighted by centrists' perceived hazardousness
Wtd. avg. benefit credulity	11.92	4.69	11.81	3.63	23.63	58							Weighted by centrists' perceived beneficialness
Cred. difference (unweighted)	-.02	.91	-.13	-2.00	2.25	56							Avg. hazards - avg. benefits
Political PCA	-.05	1.61	-.41	-3.19	3.69	58							Principal component of the following four measures
Pol. summary (Non-PCA)	-.15	3.26	-.86	-6.25	7.27	47							Summary of the four politics measures
"Society works best"	-1.69	5.54	-1.00	-13.00	13.00	52							Positive values more conservative
Political Likert	4.86	2.26	5.00	1.00	9.00	58							1 = extremely liberal 9 = extremely conservative
Political category	NA	NA	.00	NA	NA	57	.40	.28	.32				1=liberal party 0=libertarian or unaffiliated 3=conservative party
Wilson-Patterson index	-3.06	9.01	-4.00	-24.00	17.00	52							Positive values more conservative
Social conservatism	.13	2.02	-.69	-2.29	4.22	58							Principal component of sub-measure of Wilson-Patterson index
Fiscal conservatism	-.13	1.43	-.06	-3.50	3.30	58							Principal component of sub-measure of Wilson-Patterson index
Military conservatism	-.06	1.78	-.04	-3.44	3.33	58							Principal component of sub-measure of Wilson-

													Patterson index
Raven's test	-.45	1.01	-.12	-2.27	1.31	53							Correct - incorrect
Wonderlic test	-.47	.98	-.35	-2.19	1.49	47							Correct - incorrect
Age	32.17	10.97	12.00	18.00	56.00	58							Given in years
Income	4.71	4.04	4.00	65.00	15.00	55							
Sex	NA	NA	2.00	NA	NA	58	.38	.62					1=female, 2=male
Ethnicity	NA	NA	2.00	NA	NA	57	.26	.74					1=other, 2=white
Education	NA	NA	4.00	NA	NA	55	.18	.35	.04	.29	.04	.11	1=high school, 2=some college, 3=associate's, 4=bachelor's, 5=at least some advanced degree. 6 = advanced degree
Parenthood	NA	NA	1.00	NA	NA	63	.52	.48					1=no 2=yes 3=no reply

Note. Imputed values are not reported here.

Table S3. Parameter estimates, 95% confidence intervals, and *p* values for logistic model exploring predictors of being excluded for incomplete responses, not speaking English as a first language, repeat participation, and not answering catch questions.

	Study 1				*Study 2*			
Variable	*Parm. Est.*	*5% CI*	*95% CI*	*p*	*Parm. Est.*	*5% CI*	*95% CI*	*p*
(Intercept)	-1.78	-3.19	-.37	.01	-2.72	-4.03	-1.41	.00
Political summary	.10	-.14	.34	.42	-.09	-.31	.14	.45
Sex: Male	.27	-.53	1.08	.51	.61	-.14	1.37	.11
Age	-.04	-.09	.00	.08	.02	-.02	.05	.33
Ethnicity: White[1]	-.99	-1.80	-.18	.02	-.76	-1.52	-.01	.05
Income	.01	-.10	.13	.81	.03	-.06	.13	.49
Educ: Associate's	-1.01	-3.27	1.26	.38	-1.56	-3.82	.70	.18
Educ: Bachelor's	.02	-1.23	1.28	.97	-.22	-1.58	1.14	.75
Educ: Some associate's	.31	-.91	1.52	.62	-.05	-1.12	1.02	.93
Educ: Some adv. grad	-.04	-1.67	1.59	.96	.15	-.90	1.21	.77
Parenthood	.15	-.78	1.09	.75	-.42	-2.69	1.85	.72
Raven's test	---	---	---	---	-.38	-.76	.01	.06
Wonderlic test	---	---	---	---	-.46	-.87	-.04	.03

Study 1: *N* = 428. Study 2: *N* = 487. Effect not robust across iterations.

Table S4. Parameter estimates, 95% confidence intervals, and p values for models with political summary measure as a predictor, weighted hazard credulity minus weighted benefit credulity as the outcome, full model.

Variable	Study 1				Study 2			
	Parm. Est.	5% CI	95% CI	p	Parm. Est.	5% CI	95% CI	p
(Intercept)	-.27	-2.09	1.54	.77	.63	-1.25	2.52	.51
Political summary	.36	.08	.65	.01	.54	.28	.81	.00
Sex: Male	-.57	-1.53	.39	.24	.52	-.43	1.46	.29
Age	.00	-.05	.04	.98	.03	-.01	.07	.16
Ethnicity: White	-.05	-1.28	1.17	.93	-.32	-1.44	.79	.57
Income	.04	-.11	.18	.63	-.01	-.12	.10	.87
Educ: Advanced degree	---	---	---	---	-.49	-2.37	1.39	.61
Educ: Associate's	.38	-1.60	2.36	.71	.14	-1.98	2.26	.90
Educ: Bachelor's	.18	-1.29	1.65	.81	.38	-1.22	1.98	.64
Educ: Some associate's	1.23	-.31	2.77	.12	.28	-1.34	1.89	.74
Educ: Some adv. grad	.99	-.85	2.82	.29	.12	-2.42	1.89	.74
Raven's test	---	---	---	---	-.05	-.59	.49	.86
Wonderlic test	---	---	---	---	-.15	-.70	.41	.61
Parenthood	.67	-.46	1.80	.25	---	---	---	---

Study 1: $N = 472$. Adjusted $R^2 = .01$, $F(10, 461) = 1.66$, $p = .09$. Women, "other" ethnicity, some high school/high school diploma, and non-parents are held at zero. Age is centered such that the intercept represents age 19.

Study 2: $N = 476$. Adjusted $R^2 = .03$, $F(12, 463) = 2.09$, $p = .02$. Women, "other" ethnicity, some high school/high school diploma. Age is centered such that the intercept represents age 18. Parenthood status excluded for Study 2 due to large number of incompletes.

Table S5. Parameter estimates, 95% confidence intervals, and *p* values for models with political summary measure as a predictor, weighted hazard credulity minus weighted benefit credulity as the outcome, full model with no imputation.

Variable	Study 1				Study 2			
	Parm. Est.	5% CI	95% CI	*p*	Parm. Est.	5% CI	95% CI	*p*
(Intercept)	-.63	-2.57	1.31	.53	1.05	-.99	3.08	.31
Political summary	.37	.07	.67	.01	.58	.30	.86	.00
Sex: Male	-.52	-1.53	.50	.32	.52	-.49	1.52	.32
Age	-.01	-.05	.04	.83	.03	-.01	.07	.17
Ethnicity: White	.22	-1.09	1.52	.75	-.23	-1.44	.98	.71
Income	.04	-.11	.19	.64	-.01	-.14	.11	.82
Educ: Advanced degree	---	---	---	---	-.81	-2.81	1.18	.42
Educ: Associate's	.59	-1.51	2.69	.58	-.06	-2.36	2.25	.96
Educ: Bachelor's	.35	-1.23	1.94	.66	-.17	-1.87	1.52	.84
Educ: Some associate's	1.33	-.31	2.97	.11	-.21	-1.91	1.49	.81
Educ: Some adv. grad	1.03	-.94	2.99	.31	-.64	-3.28	2.01	.64
Raven's test	---	---	---	---	-.20	-.78	.38	.51
Wonderlic test	---	---	---	---	-.18	-.77	.41	.54
Parenthood	.83	-.35	2.02	.17	---	---	---	---

Study 1: $N = 441$. Adjusted $R^2 = .01$, $F(10, 430) = 1.63$, $p = .09$. Women, "other" ethnicity, some high school/high school diploma, and non-parents are held at zero. Age is centered such that the intercept represents age 19.

Study 2: $N = 432$. Adjusted $R^2 = .03$, $F(12, 419) = 2.19$, $p = .011$. Women, "other" ethnicity, some high school/high school diploma, and non-parents are held at zero. Age is centered such that the intercept represents age 18. Parenthood status excluded for Study 2 due to large number of incompletes.

Table S6a. Parameter estimates, 95% confidence intervals, and *p* values for models with political summary measure as a predictor, weighted hazard credulity as the outcome.

	Study 1				Study 2			
Variable	*Parm. Est.*	*5% CI*	*95% CI*	*p*	*Parm. Est.*	*5% CI*	*95% CI*	*p*
(Intercept)	13.72	12.03	15.41	.00	12.74	10.87	14.60	.00
Political summary	.48	.22	.75	.00	.59	.33	.85	.00
Sex: Male	-1.74	-2.63	-.85	.00	-.18	-1.12	.75	.70
Age	.02	-.02	.06	.40	.07	.03	.11	.00
Ethnicity: White	-.88	-2.02	.26	.13	-.59	-1.70	.52	.30
Income	-.13	-.26	.00	.05	-.06	-.17	.05	.27
Educ: Advanced degree	---	---	---	---	-.48	-2.35	1.39	.61
Educ: Associate's	-.13	-1.97	1.71	.89	.25	-1.86	2.35	.82
Educ: Bachelor's	-.16	-1.52	1.21	.82	-.36	-1.94	1.23	.66
Educ: Some associate's	.73	-.71	2.16	.32	-.38	-1.98	1.22	.64
Educ: Some adv. grad	-.39	-2.09	1.31	.66	.13	-2.39	2.66	.92
Parenthood	.77	-.28	1.82	.15	---	---	---	---
Raven's test	---	---	---	---	-.17	-.71	.36	.53
Wonderlic test	---	---	---	---	-.97	-1.52	-.42	.00

Study 1: $N = 472$. Adjusted $R^2 = .03$, $F(10, 461) = 2.52$, $p = .006$. Women, "other" ethnicity, some high school/high school diploma, and non-parents are held at zero. Age is centered such that the intercept represents age 19.

Study 2: $N = 476$. Adjusted $R^2 = .12$, $F(12, 463) = 6.61$, $p < .001$. Women, "other" ethnicity, some high school/high school diploma, and non-parents are held at zero. Age is centered such that the intercept represents age 18. Parenthood status excluded for Study 2 due to large number of incompletes.

Table S6b. Parameter estimates, 95% confidence intervals, and *p* values for models with political summary measure as a predictor, weighted benefit credulity as the outcome.

	Study 1				Study 2			
Variable	*Parm. Est.*	*5% CI*	*95% CI*	*p*	*Parm. Est.*	*5% CI*	*95% CI*	*p*
(Intercept)	13.99	12.41	15.57	.00	12.10	10.37	13.83	.00
Political summary	.12	-.13	.37	.34	.05	-.19	.29	.69
Sex: Male	-1.17	-2.00	-.34	.01	-.70	-1.57	.17	.12
Age	.02	-.02	.06	.35	.04	.01	.08	.02
Ethnicity: White	-.83	-1.89	.24	.13	-.27	-1.29	.76	.61
Income	-.17	-.29	-.04	.01	-.05	-.16	.05	.32
Educ: Advanced degree	---	---	---	---	.00	-1.73	1.74	1.00
Educ: Associate's	-.51	-2.23	1.21	.56	.10	-1.85	2.05	.92
Educ: Bachelor's	-.34	-1.62	.94	.61	-.74	-2.21	.73	.33
Educ: Some associate's	-.50	-1.84	.84	.46	-.66	-2.14	.82	.38
Educ: Some adv. grad.	-1.37	-2.96	.22	.09	.01	-2.33	2.35	.99
Parenthood	.10	-.89	1.08	.84	---	---	---	---
Raven's test	---	---	---	---	-.12	-.62	.38	.63
Wonderlic test	---	---	---	---	-.82	-1.33	-.32	.00

Study 1: $N = 472$. Adjusted $R^2 = .03$, $F(10, 461) = 2.52$, $p = .006$. Women, "other" ethnicity, some high school/high school diploma, and non-parents are held at zero. Age is centered such that the intercept represents age 19.

Study 2: $N = 476$. Adjusted $R^2 = .06$, $F(12, 463) = 3.47$, $p < .001$. Women, "other" ethnicity, some high school/high school diploma, and non-parents are held at zero. Age is centered such that the intercept represents age 18. Parenthood status excluded for Study 2 due to large number of incompletes.

Table S7. Parameter estimates, 95% confidence intervals, and *p* values for models with the non-principal components analysis political summary measure as a predictor, weighted hazard credulity minus weighted benefit credulity as the outcome.

Variable	Study 1				Study 2			
	Parm. Est.	*5% CI*	*95% CI*	*p*	*Parm. Est.*	*5% CI*	*95% CI*	*p*
(Intercept)	-.27	-2.09	1.54	.77	.63	-1.25	2.51	.51
Pol. summary (non-PCA)	.18	.04	.32	.01	.27	.14	.40	.00
Sex: Male	-.57	-1.53	.39	.24	.51	-.43	1.46	.29
Age	.00	-.05	.04	.98	.03	-.01	.07	.16
Ethnicity: White	-.06	-1.28	1.17	.93	-.33	-1.44	.79	.57
Income	.04	-.11	.18	.63	-.01	-.12	.10	.87
Educ: Advanced degree	---	---	---	---	-.49	-2.37	1.40	.61
Educ: Associate's	.38	-1.60	2.36	.71	.15	-1.97	2.27	.89
Educ: Bachelor's	.18	-1.29	1.65	.81	.38	-1.21	1.98	.64
Educ: Some associate's	1.23	-.31	2.77	.12	.28	-1.34	1.89	.74
Educ: Some adv. grad.	.98	-.85	2.82	.29	.13	-2.42	2.67	.92
Parenthood	.67	-.46	1.81	.24	---	---	---	---
Raven's test	---	---	---	---	-.05	-.60	.49	.85
Wonderlic test	---	---	---	---	-.15	-.70	.40	.60

Study 1: $N = 472$. Adjusted $R^2 = .01$, $F(10, 461) = 1.66$, $p = .09$. Women, "other" ethnicity, some high school/high school diploma, and non-parents are held at zero. Age is centered such that the intercept represents age 19.

Study 2: $N = 476$. Adjusted $R^2 = .03$, $F(12, 463) = 2.08$, $p = .017$. Women, "other" ethnicity, some high school/high school diploma, and non-parents are held at zero. Age is centered such that the intercept represents age 18. Parenthood status excluded for Study 2 due to large number of incompletes.

Table S8. Parameter estimates, 95% confidence intervals, and p values for models with political summary measure as a predictor, with the unweighted difference between a participant's hazard and benefit credulity as the outcome.

Variable	Study 1				Study 2			
	Parm. Est.	5% CI	95% CI	p	Parm. Est.	5% CI	95% CI	p
(Intercept)	-.20	-.49	.10	.19	-.15	-.46	.16	.34
Political summary	.05	.01	.10	.03	.06	.02	.11	.00
Sex: Male	-.07	-.23	.08	.34	.14	-.01	.30	.07
Age	.00	-.01	.01	.87	.01	.00	.01	.06
Ethnicity: White	-.13	-.33	.06	.19	-.14	-.32	.05	.14
Income	.01	-.01	.04	.30	.01	-.01	.03	.47
Educ: Advanced degree	---	---	---	---	-.07	-.38	.24	.66
Educ: Associate's	.07	-.25	.39	.67	-.01	-.36	.34	.97
Educ: Bachelor's	-.04	-.28	.20	.74	.08	-.18	.35	.54
Educ: Some associate's	.14	-.11	.38	.28	.03	-.24	.30	.82
Educ: Some adv. grad.	.09	-.20	.39	.54	-.09	-.51	.33	.68
Parenthood	.14	-.04	.32	.14	---	---	---	---
Raven's test	---	---	---	---	.02	-.07	.11	.72
Wonderlic test	---	---	---	---	-.10	-.19	-.01	.03

Study 1: $N = 472$. Adjusted $R^2 = .01$, $F(10, 461) = 1.66$, $p = .09$. Women, "other" ethnicity, some high school/high school diploma, and non-parents are held at zero. Age is centered such that the intercept represents age 19.

Study 2: $N = 476$. Adjusted $R^2 = .03$, $F(12, 463) = 2.08$, $p = .017$. Women, "other" ethnicity, some high school/high school diploma, and non-parents are held at zero. Age is centered such that the intercept represents age 18. Parenthood status excluded for Study 2 due to large number of incompletes.

Table S9a. Parameter estimates, 95% confidence intervals, and *p* values for models with political summary measure as a predictor, with a participant's credulity for each hazard item (i.e., not their mean credulity) as the outcome.

Variable	Study 1				Study 2			
	Parm. Est.	5% CI	95% CI	p	Parm. Est.	5% CI	95% CI	p
(Intercept)	2.19	1.63	2.76	.00	2.11	1.50	2.72	.00
Political summary	.05	.01	.09	.01	.06	.03	.10	.00
Sex: Male	-.14	-.28	-.01	.04	.00	-.13	.13	1.00
Age	.00	-.01	.01	.72	.01	.00	.01	.00
Ethnicity: White	-.14	-.31	.03	.12	-.12	-.28	.04	.14
Income	-.01	-.03	.01	.28	.00	-.01	.02	.69
Educ: Advanced degree	---	---	---	---	-.09	-.36	.18	.52
Educ: Associate's	.06	-.22	.33	.67	-.02	-.31	.27	.89
Educ: Bachelor's	-.03	-.24	.17	.76	-.04	-.26	.19	.76
Educ: Some associate's	.09	-.13	.30	.43	-.15	-.38	.08	.21
Educ: Some adv. grad.	.09	-.17	.34	.49	-.03	-.40	.33	.87
Parenthood	.06	-.05	.26	.19	---	---	---	---
Raven's test	---	---	---	---	-.01	-.09	.06	.75
Wonderlic test	---	---	---	---	-.13	-.20	-.05	.00
Gravity	.09	.06	.13	.00	.10	.06	.13	.00

Study 1: *N* = 472. Variance explained by random intercepts for participant: .20, and for question: .48; residual variance: 2.57. Log likelihood = -7294.42.

Study 2: *N* = 476. Variance explained by random intercepts for participant: .13, and for question: .59; residual variance: 2.66. Log likelihood = -7357.97**.**

Table S9b. Parameter estimates, 95% confidence intervals, and *p* values for models with political summary measure as a predictor, with a participant's credulity for each benefit item (i.e., not their mean credulity) as the outcome.

Variable	Study 1				Study 2			
	Parm. Est.	5% CI	95% CI	p	Parm. Est.	5% CI	95% CI	p
(Intercept)	1.49	1.10	1.88	.00	1.39	1.04	1.75	.00
Political summary	.00	-.04	.04	.90	.02	-.02	.06	.26
Sex: Male	-.01	-.14	.12	.93	-.07	-.20	.06	.30
Age	.00	-.01	.00	.43	.00	.00	.01	.50
Ethnicity: White	.06	-.11	.23	.48	.05	-.10	.21	.50
Income	-.02	-.04	.00	.09	-.01	-.02	.01	.43
Educ: Advanced degree	---	---	---	---	.07	-.19	.33	.60
Educ: Associate's	.02	-.25	.29	.88	-.01	-.29	.28	.97
Educ: Bachelor's	.02	-.18	.22	.86	-.06	-.28	.16	.61
Educ: Some associate's	.00	-.20	.21	.97	-.15	-.37	.07	.19
Educ: Some adv. grad.	.09	-.15	.34	.46	.17	-.18	.53	.34
Parenthood	-.06	-.22	.09	.42	---	---	---	---
Raven's test	---	---	---	---	-.03	.97	1.12	.41
Wonderlic test	---	---	---	---	.03	-.05	.10	.45
Gravity	.30	.27	.33	.00	.30	.27	.33	.00

Study 1: *N* = 472. Variance explained by random intercepts for participant: .19, and for question: .15; residual variance: 2.42. Log likelihood = -7177.94.

Study 2: *N* = 476. Variance explained by random intercepts for participant: .16, and for question: .09; residual variance: 2.25. Log likelihood = -7041.79.

Table S10. Parameter estimates, 95% confidence intervals, and *p* values for models with political summary measure as a predictor and parenthood status as a control, weighted hazard credulity minus weighted benefit credulity as the outcome, Study 2.

Variable	Parm. Est.	5% CI	95% CI	p
(Intercept)	.83	-1.16	2.83	.41
Political summary	.57	.29	.86	.00
Sex: Male	.42	-.60	1.43	.42
Age	.03	-.02	.07	.23
Ethnicity: White	-.72	-1.92	.49	.25
Income	.04	-.08	.17	.52
Educ: Advanced degree	-.60	-2.60	1.41	.56
Educ: Associate's	.03	-2.27	2.32	.98
Educ: Bachelor's	.33	-1.41	2.06	.71
Educ: Some associate's	.32	-1.41	2.06	.71
Educ: Some adv. grad.	-.43	-3.26	2.40	.77
Raven's test	-.28	-.86	.30	.34
Wonderlic test	-.08	-.67	.50	.78
Parenthood	.10	-.96	1.17	.85

$N = 418$. Adjusted $R^2 = .03$, $F(13, 404) = 2.03$, $p = .017$. Women, "other" ethnicity, some high school/high school diploma, and non-parents are held at zero. Age is centered such that the intercept represents age 19.

Table S11. Parameter estimates, 95% confidence intervals, and *p* values for models with political summary measure as a predictor, weighted hazard credulity minus weighted benefit credulity as the outcome, including all liberals excluded for Study 2 analyses.

Variable	Parm. Est.	5% CI	95% CI	p
(Intercept)	.68	-.98	2.34	.42
Political summary	.56	.33	.79	.00
Sex: Male	.47	-.35	1.28	.26
Age	.02	-.02	.05	.32
Ethnicity: White	-.46	-1.43	.52	.36
Income	-.02	-.11	.08	.77
Educ: Advanced degree	-.62	-2.29	1.04	.46
Educ: Associate's	.63	-1.20	2.45	.50
Educ: Bachelor's	.51	-.89	1.91	.48
Educ: Some associate's	.23	-1.18	1.65	.75
Educ: Some adv. grad.	.44	-1.74	2.62	.69
Raven's test	-.15	-.63	.33	.55
Wonderlic test	-.21	-.70	.27	.39

$N = 607$. Adjusted $R^2 = .04$, $F(12, 594) = 3.09$, $p < .001$. Women, "other" ethnicity, some high school/high school diploma, and non-parents are held at zero. Age is centered such that the intercept represents age 19. Parenthood status excluded for Study 2 due to large number of incompletes.

Table S12. Parameter estimates, 95% confidence intervals, and p values for models with political summary measure as a predictor interacting with sex of the participant, weighted hazard credulity minus weighted benefit credulity as the outcome.

Variable	Study 1				Study 2			
	Parm. Est.	5% CI	95% CI	p	Parm. Est.	5% CI	95% CI	p
(Intercept)	-.27	-2.09	1.55	.77	.61	-1.27	2.49	.53
Political summary	.41	.01	.81	.04	.31	-.08	.69	.12
Sex: Male	-.57	-1.53	.39	.24	.53	-.41	1.47	.27
Age	.00	-.05	.05	.99	.03	-.01	.07	.13
Ethnicity: White	-.04	-1.27	1.19	.94	-.31	-1.42	.81	.59
Income	.04	-.11	.18	.62	.00	-.11	.11	.99
Educ: Advanced degree	---	---	---	---	-.58	-2.46	1.30	.55
Educ: Associate's	.37	-1.60	2.35	.71	.00	-2.13	2.12	.99
Educ: Bachelor's	.16	-1.31	1.64	.83	.31	-1.29	1.90	.71
Educ: Some associate's	1.21	-.34	2.75	.13	.21	-1.40	1.82	.80
Educ: Some adv. grad.	.96	-.88	2.80	.31	-.03	-2.58	2.51	.98
Parenthood	.66	-.47	1.80	.25	---	---	---	---
Raven's test	---	---	---	---	-.05	-.60	.49	.85
Wonderlic test	---	---	---	---	-.18	-.73	.37	.53
Political Summary * Sex	-.10	-.65	.46	.74	.43	-.08	.95	.10

Study 1: $N = 472$. Adjusted $R^2 = .01$, $F(11, 460) = 1.52$, $p = .12$. Women, "other" ethnicity, some high school/high school diploma, and non-parents are held at zero. Age is centered such that the intercept represents age 19.

Study 2: $N = 476$. Adjusted $R^2 = .03$, $F(13, 462) = 2.15$, $p = .011$. Women, "other" ethnicity, some high school/high school diploma, and non-parents are held at zero. Age is centered such that the intercept represents age 18. Parenthood status excluded for Study 2 due to large number of incompletes.

Table S13. Parameter estimates, 95% confidence intervals, and *p* values for models with political summary measure as a predictor interacting with the age of the participant, weighted hazard credulity minus weighted benefit credulity as the outcome.

	Study 1				Study 2			
Variable	*Parm. Est.*	*5% CI*	*95% CI*	*p*	*Parm. Est.*	*5% CI*	*95% CI*	*p*
(Intercept)	-.28	-2.10	1.53	.76	.63	-1.25	2.52	.51
Political summary	.15	-.36	.66	.57	.53	.07	1.00	.02
Sex: Male	.00	-.05	.04	.91	.03	-.01	.07	.18
Age	-.59	-1.55	.38	.23	.52	-.43	1.46	.29
Ethnicity: White	-.04	-1.26	1.19	.95	-.32	-1.44	.80	.57
Income	.03	-.11	.17	.69	-.01	-.12	.10	.87
Educ: Advanced degree	---	---	---	---	-.48	-2.37	1.40	.62
Educ: Associate's	.45	-1.53	2.43	.66	.14	-1.98	2.27	.90
Educ: Bachelor's	.20	-1.27	1.68	.79	.38	-1.22	1.98	.64
Educ: Some associate's	1.23	-.31	2.77	.12	.27	-1.34	1.89	.74
Educ: Some adv. grad.	1.07	-.77	2.91	.25	.12	-2.43	2.67	.93
Parenthood	.68	-.45	1.82	.24	---	---	---	---
Raven's test	---	---	---	---	-.05	-.59	.49	.86
Wonderlic test	---	---	---	---	-.15	-.70	.41	.60
*Political Summary * Age*	.01	-.01	.03	.33	.00	-.02	.02	.97

Study 1: $N = 472$. Adjusted $R^2 = .01$, $F(11, 460) = 1.59$, $p = .10$. Women, "other" ethnicity, some high school/high school diploma, and non-parents are held at zero. Age is centered such that the intercept represents age 19.

Study 2: $N = 476$. Adjusted $R^2 = .03$, $F(13, 462) = 1.93$, $p = .025$. Women, "other" ethnicity, some high school/high school diploma, and non-parents are held at zero. Age is centered such that the intercept represents age 18. Parenthood status excluded for Study 2 due to large number of incompletes.

Figure S1. The estimated effect of political orientation on the difference between hazard and benefit credulity with the terrorism item excluded, across five seeds for imputation (with 95% confidence intervals) for (A) Study 1 and (B) Study 2. The effect of political orientation on credulity was robust across the exclusion of any of the other 15 items.
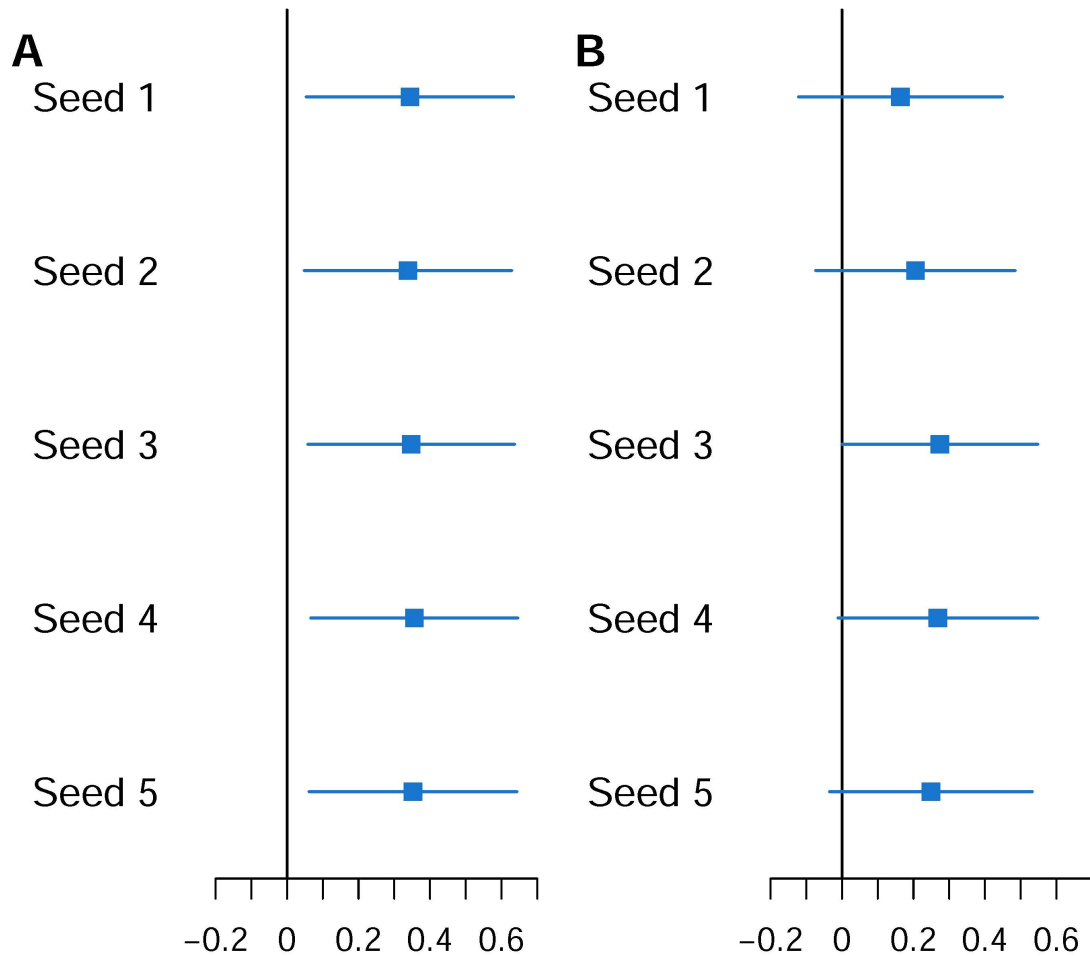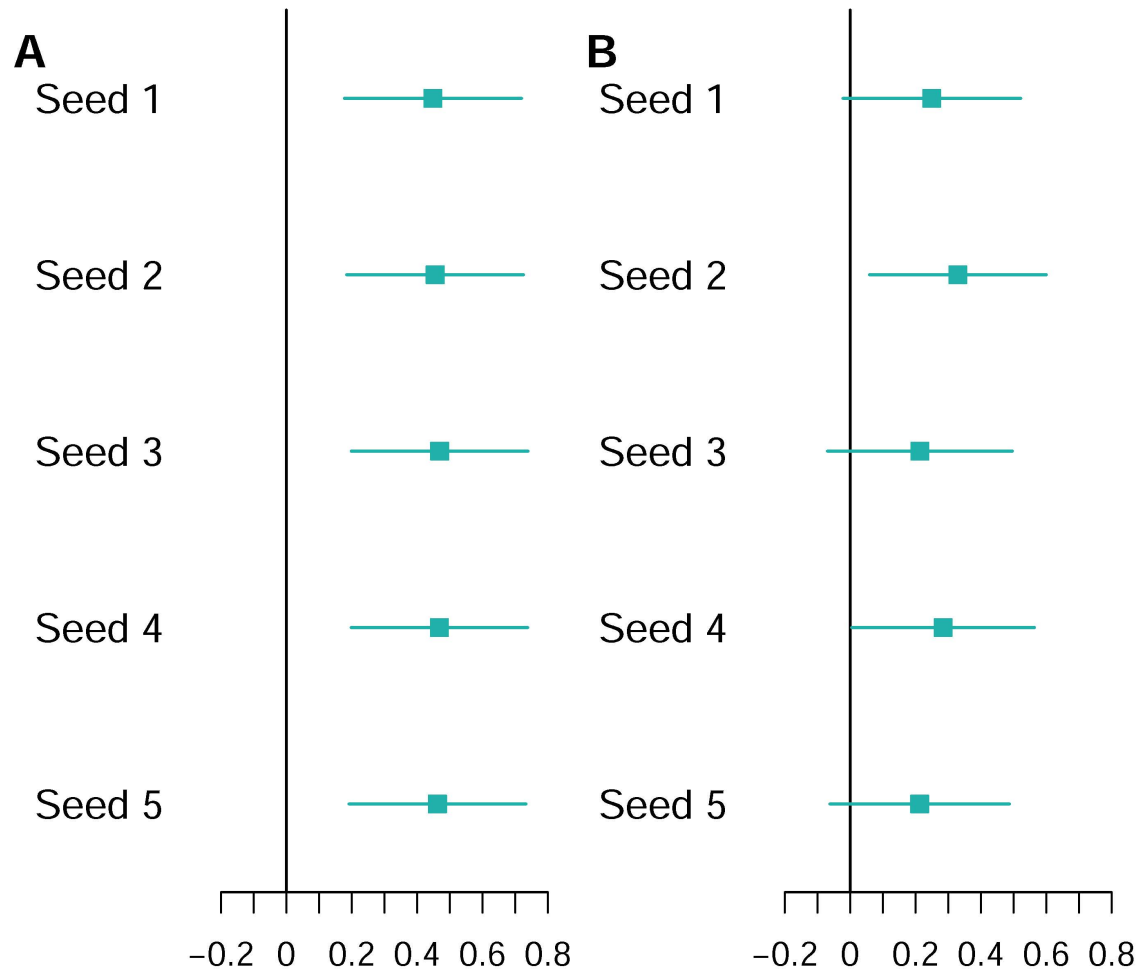
Figure S2. The estimated effect of political orientation <u>on hazard credulity</u> with the terrorism item excluded, across five seeds for imputation (with 95% confidence intervals) for (A) Study 1 and (B) Study 2. The effect of political orientation on credulity was robust across the exclusion of any of the other 15 items.

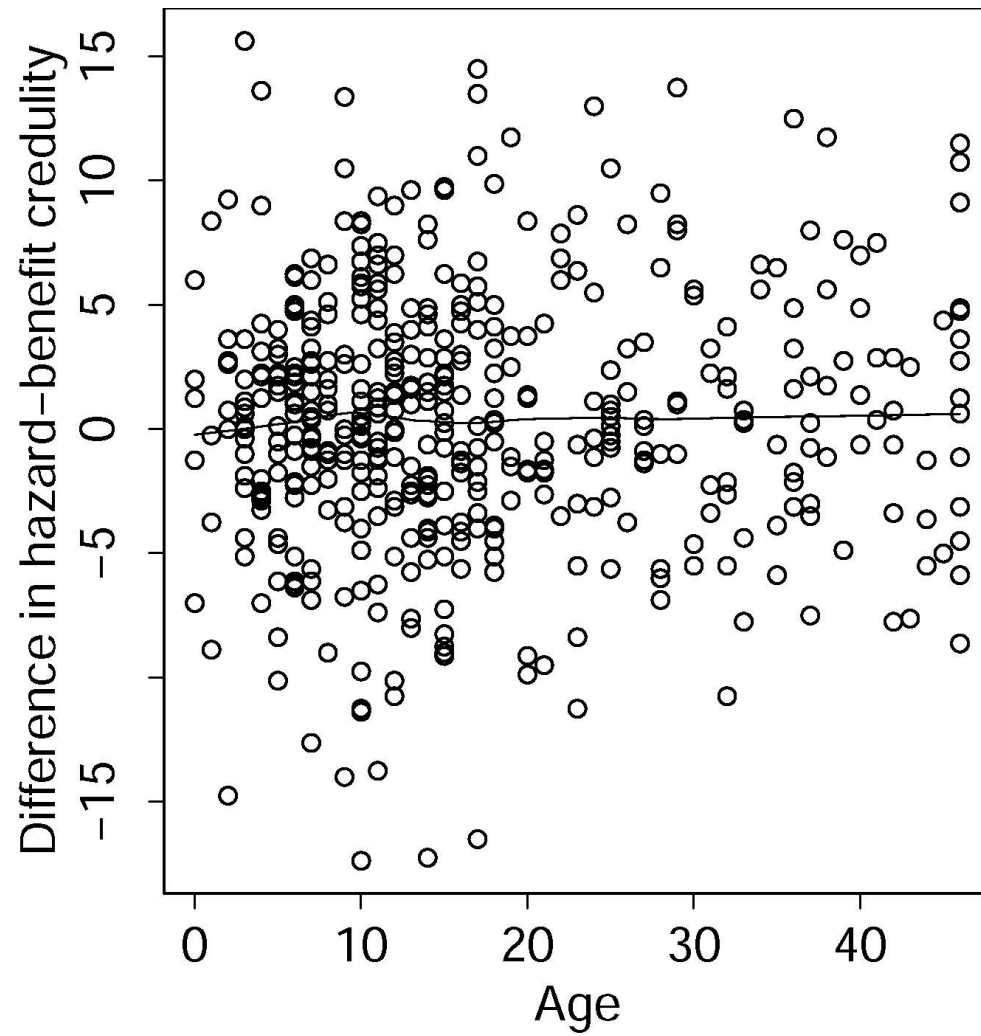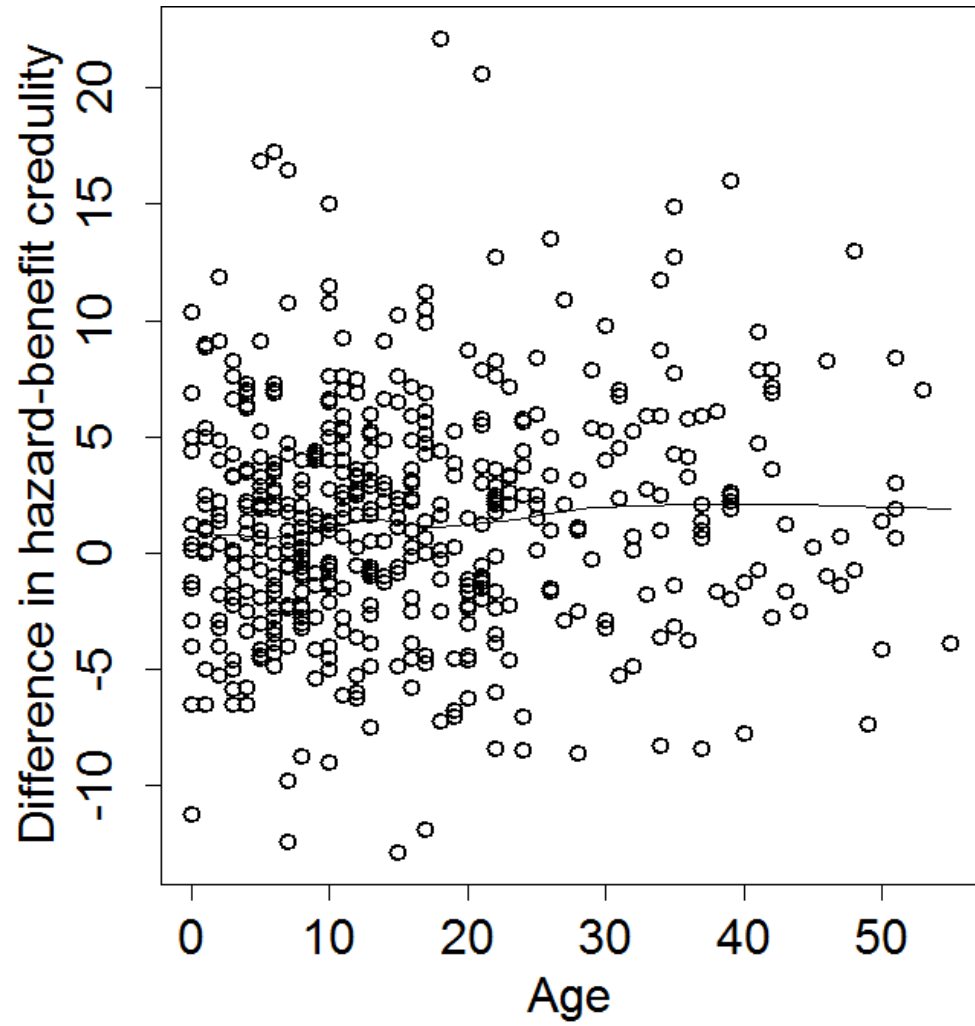**Figure S3a.** LOESS fit of weighted hazard credulity by age for Study 1.

Figure S3b. LOESS fit of weighted hazard credulity by age for Study 2.

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