Assimilation bias and source credibility in news processing SUPPORTING INFORMATION

Bernhard Clemm von Hohenberg[*]

10 May, 2021

Contents

---

[*]University of Amsterdam. Email: b.f.d.clemm@uva.nl. Orcid ID: 0000-0002-6976-9745. This appendix is based on a fully reproducible RMarkdown file that contains code to replicate all graphs and analyses. See https://github.com/BernhardClemm/paper-ocean-of-truth-git. This describes the raw data. Some of the data were post-weighted for analysis in related published commentary.

1 Sample and population statistics

The study uses a non-probability quota sample. Tables A1 through A4 show the sample's distributions on age, gender, education and state of residence in comparison with the population distribution.

Table A1: Sex distribution of population and samples

Sex	Population		Sample	
	Abs.[a]	Percent	Abs.	Percent
male	33875273	48.91	203	48.56
female	35378932	51.09	215	51.44

[a] Population statistics refer to the adult population. 2011 census data extrapolated to 2017 by https://www-genesis.destatis.de/

Table A2: Age distribution of population and samples

Age	Population		Sample	
	Abs.[a]	Percent	Abs.	Percent
18-30ys	12709507	18.35	90	21.53
31-43ys	13190233	19.05	113	27.03
44-56ys	16559912	23.91	90	21.53
57-69ys	13796536	19.92	58	13.88
70+	12998017	18.77	67	16.03

[a] Population statistics refer to the adult population. 2011 census data extrapolated to 2017 by https://www-genesis.destatis.de/

Table A3: Education distribution of population and samples

Education	Population		Sample	
	Abs.[a]	Percent	Abs.	Percent
None or still in school	3343810	5.02	11	2.63
Lower school (Volks-/Hauptschule)	24394040	36.65	75	17.94
Middle school (Realschule)	19276770	28.96	112	26.79
Technical high school (Fachabitur)	5528870	8.31	35	8.37
High school (Abitur)	14019280	21.06	78	18.66
University	14019280	21.06	107	25.60

[a] Population statistics refer to the adult population. 2011 census data extrapolated to 2017 by https://www-genesis.destatis.de/

Table A4: Geographic distribution of population and samples

Federal state	Population		Sample	
	Abs.[a]	Percent	Abs.	Percent
Baden-Württemberg	9161332	13.23	51	13.08
Bayern	10864671	15.69	57	14.62

Berlin	3025036	4.37	23	5.90
Brandenburg	2115783	3.06	9	2.31
Bremen	571853	0.83	1	0.26
Hamburg	1527717	2.21	12	3.08
Hessen	5201114	7.51	34	8.72
Mecklenburg-Vorpommern	1368302	1.98	6	1.54
Niedersachsen	6633598	9.58	38	9.74
Nordrhein-Westfalen	14924300	21.55	83	21.28
Rheinland-Pfalz	3415975	4.93	12	3.08
Saarland	848347	1.22	7	1.79
Sachsen	3447945	4.98	23	5.90
Sachsen-Anhalt	1901547	2.75	8	2.05
Schleswig-Holstein	2418125	3.49	14	3.59
Thüringen	1828560	2.64	12	3.08

[a] Population statistics refer to the adult population. 2011 census data extrapolated to 2017 by https://www-genesis.destatis.de/

2 Treatment balance

Tables A5 and A6 show balance statistics across the two treatment dimensions analysed, i.e. content and source. Variables include basic sociodemographics and those relevant for hypotheses. As treatments were re-assigned for each topic, four differences are displayed for each variable for Study 1. Note that for one attitude item, content treatment groups are imbalanced (bold p-value). Since this covariate is included in the analysis anyway, the imbalance can be ignored (cf. Mutz & Pemantle, 2015, p. 201).

Table A5: Balance statistics for content treatment

Variable	Topic	Right-wing	Left-wing	Significance[a]
Age (mean)	Welfare State	45.93	46.91	0.58
	Domestic Security	46.26	46.58	0.86
	Immigration	45.43	47.45	0.25
	European Integration	46.78	46.08	0.69
Attitude index (mean)	Welfare State	-1.54	-1.47	0.69
	Domestic Security	1.58	2.20	**0**
	Immigration	1.15	1.21	0.82
	European Integration	0.35	0.68	0.2
Education (prop. high)	Welfare State	0.51	0.54	0.57
	Domestic Security	0.56	0.50	0.19
	Immigration	0.57	0.48	0.05
	European Integration	0.54	0.51	0.61
Residence (prop. West)	Welfare State	0.87	0.84	0.4
	Domestic Security	0.87	0.83	0.29
	Immigration	0.84	0.86	0.69
	European Integration	0.83	0.87	0.31
Sex (prop. female	Welfare State	0.52	0.51	0.76
	Domestic Security	0.52	0.51	0.83
	Immigration	0.53	0.50	0.5
	European Integration	0.52	0.50	0.69

[a] p-value of t-test for proportions and means. Differences significant at 5%-level in bold.

Table A6: Balance statistics for source treatment

Variable	Topic	Right-wing	Left-wing	Significance[a]
Age (mean)	Welfare State	46.09	46.77	0.7
	Domestic Security	46.08	46.80	0.68
	Immigration	46.47	46.39	0.96
	European Integration	47.01	45.83	0.5
Attitude index (mean)	Welfare State	-1.46	-1.54	0.65
	Domestic Security	1.82	1.98	0.38
	Immigration	1.24	1.12	0.65
	European Integration	0.54	0.50	0.9
Education (prop. high)	Welfare State	0.49	0.57	0.12
	Domestic Security	0.56	0.50	0.22
	Immigration	0.53	0.52	0.92
	European Integration	0.57	0.48	0.08
Residence (prop. West)	Welfare State	0.86	0.84	0.71
	Domestic Security	0.88	0.82	0.12
	Immigration	0.88	0.83	0.19
	European Integration	0.87	0.83	0.26
Sex (prop. female	Welfare State	0.51	0.52	0.77
	Domestic Security	0.48	0.55	0.17
	Immigration	0.51	0.51	1
	European Integration	0.49	0.54	0.38

[a] p-value of t-test for proportions and means. Differences significant at 5%-level in bold.

3   Attitude measurement

For each of the four topics, subjects were asked to indicate their agreement with four statements on an 11-point scale. Question wordings are provided below, as well as the distributions of single items and composite indices (coded so that left end of the scale always represents are politically left position).

Welfare state

- "The current wealth and income distribution in Germany is unjust." (reverse coded)
- "Someone working hard nowadays can improve their life situation without much difficulty."
- "The state should do more for the support of the unemployed even if that means raising taxes or incurring public debt." (reverse coded)
- "Wealth tax should be re-introduced." (reverse coded)

Domestic security

- "Courts treat violent criminals too leniently."
- "Overall, our country is well protected against terrorism."
- "The state should take a tougher stance on terrorist suspects."
- "The state should implement more CCTV in the public space."

Migration

- "I appreciate that Germany has taken in many refugees." (reverse coded)
- "There should be an upper limit for number of refugees taken in."
- "The German state is more concerned about refugees than Germans in need."
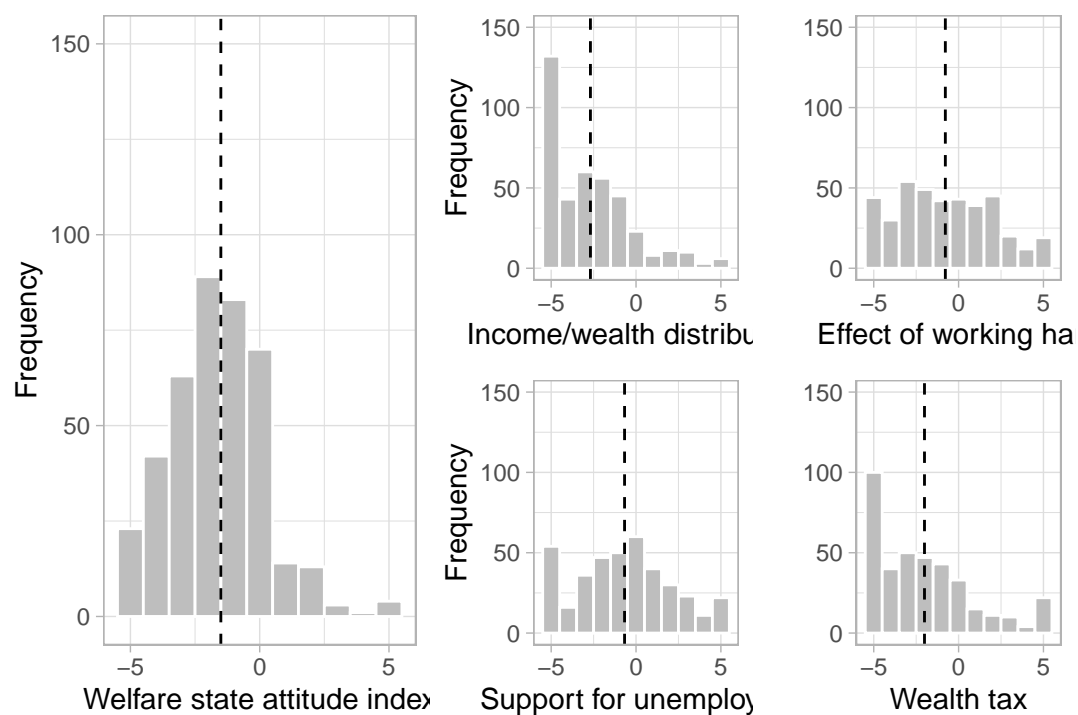- "The living standard of Germans will decrease because of the reception of refugees."

Figure A1: Distributions of welfare state attitudes

European integration

- "Germany should have a referendum on its EU membership."
- "The EU interferes too much with Europeans' lives."
- "Germany should pay less into the EU budget."
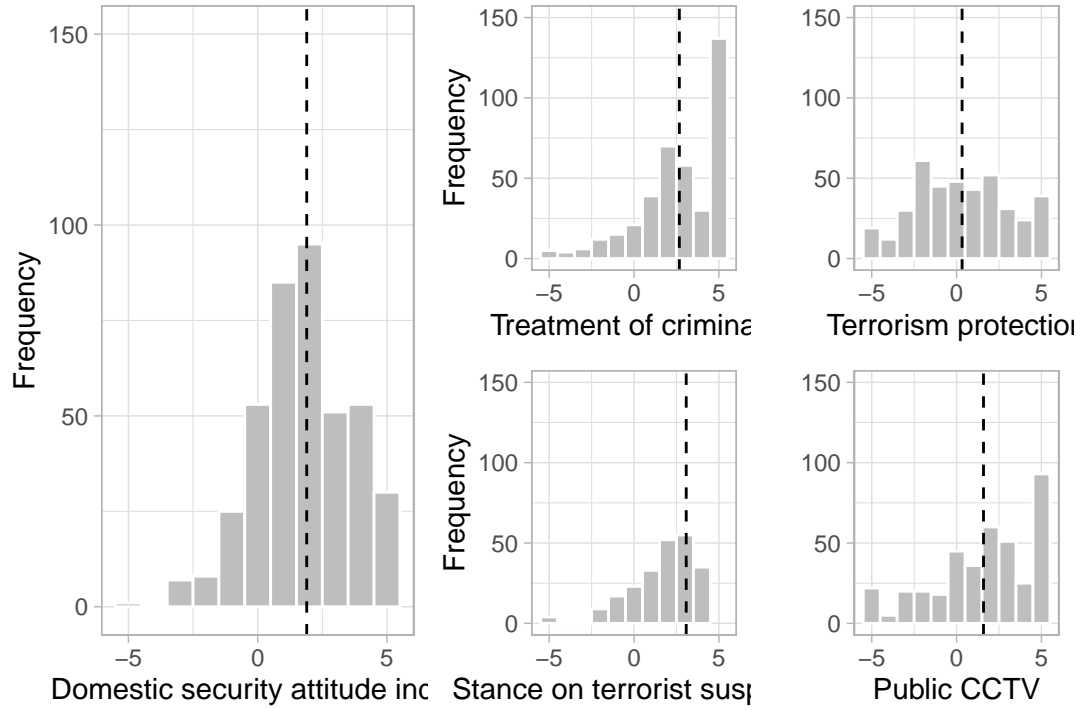- "Countries with financial problems should be excluded from the Euro zone."

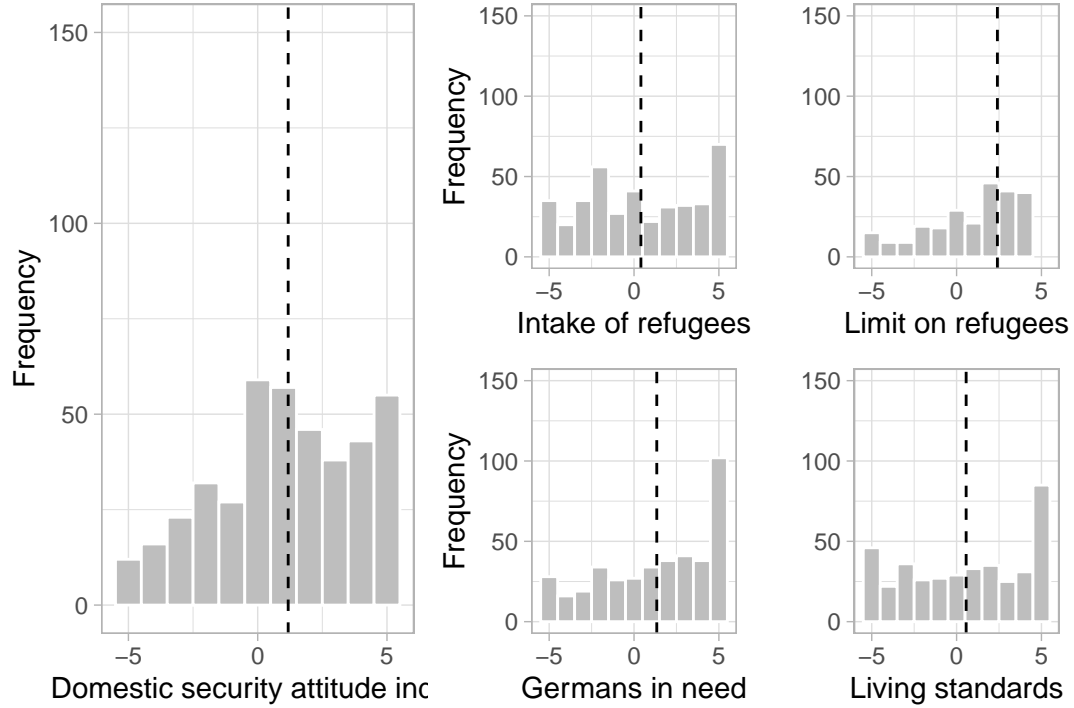Figure A2: Distributions of domestic security attitudes

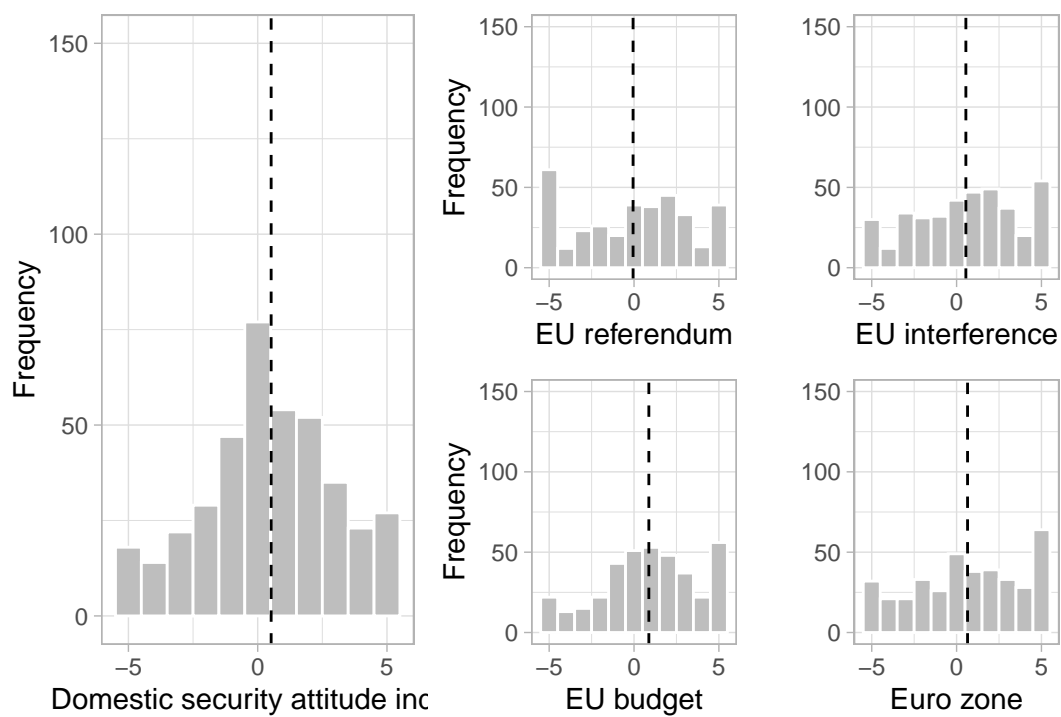Figure A3: Distributions of migration attitudes

6

Figure A4: Distributions of European integration attitudes

4 Stimuli and content manipulations

For each topic, the main stimulus was a screenshot of a Facebook post containing a news report. The post was built like a typical news post and included a headline, a photo, a teaser, the name and logo of the source as well as its URL. Contents were manipulated so that the two content treatments contained opposing factual claims. For the topics of immigration and European integration, a couple of paragraphs of the report were shown in addition to the Facebook post, introduced by the words: "For this story, we will show you a few paragraphs of the linked text (Source: [source])." Figure A5 illustrates the two treatment dimensions. Wording of news reports translated from German below. Square brackets indicate differences between treatments. The left-wing content ttreatment always comes first within a square bracket.

4.1 Welfare state

Headline: *Hartz IV benefit cuts: Sanctions [push unemployed into ill-paid jobs /speed up entry into regular employment]

Teaser: Benefit cuts for those who violate Hartz IV requirements [fall short of desired effects / are effective]: Our data [show that sanctioned move into ill-paid jobs. The risk of becoming a working poor increases / suggest that sanctioned unemployed move more often and more quickly into regular employment].

4.2 Domestic security

Headline: Europe-wide comparison: [Arrest of terrorist suspects does not decrease risk of terrorism / Fewer terrorist attacks in countries with strict arrest of terrorist suspects]

Teaser: Is the pre-emptive arrest of terrorist suspects reasonable? European countries with stricter measures have [not experienced / experienced] less terrorist attacks in the last ten years, as a study shows.

4.3 Immigration

Headline: [Craft traineeships: Completion rates in craft as high for refugees as for natives / Craft traineeships: Nine out of ten refugees cancel their traineeship]

Teaser: Refugees [complete their craft traineeships by now as often as other trainees / discontinue their craft traineeships more often than average], as numbers by the Chamber of Crafts show.*

Text: Refugees [complete / discontinue] their traineeships in German handicraft businesses [as often as native trainees / more often than average]. [About three quarter / Almost 90 percent] of trainees who had fled from Syria, Afghanistan and Iraq and had started a traineeship since the beginning of 2013 [have by now completed or are still in training / have dropped out without finishing], as a Germany-wide investigation by [source] revealed. [Their completion rate (74.8 percent) corresponds roughly to that of all other trainees (73.5 percent) / For all other trainees, the dropout rate is substantially lower at around 25 percent].

For the investigation, data from the Chambers of Craft of all German states were analysed. The Chambers have initiated various programmes for the integration of refugees into the labour market and recorded the numbers of allocated and successfully trained refugees. The dropout rates are not equally high for all states and fluctuate between [85 / 60] percent (Saarland) and [65 / 95] percent (Lower Saxony). On average, the rate is [74.8 / 89.5] percent. [Anecdotal numbers from earlier periods had painted a much worse picture /].

When asked for the reasons [for the apparent rise of completion rates, several representatives of businesses and Chambers refer to more realistic expectations of refugees / several representatives of businesses and Chambers refer to unrealistic expectations on the refugees' part]. '[In the beginning, many have the idea of earning lots of money in Germany quickly and send it back home / Many have the idea of earning lots of money in Germany quickly and send it back home],' said Lothar Semper from the Chamber Munich and Upper Bavaria. [Now they understand / It is necessary to communicate to them], he said, that in the long run [opting for a traineeship is a better decision / it is worth opting for a traineeship and earn less at the start]. [The majority accepts the

8

comparably low wage during the traineeship and show a particularly high motivation / Given the comparably low wage during the traineeship much persuasion is necessary to bring young people to start a traineeship in the first place].

4.4   European integration

Headline: EU programme to reduce regulations [shows effects / unsuccessful, but costly]

Teaser: Since two years ago, a programme of the EU Commission is meant to repeal unnecessary legislation. [With success: Over 60 pieces of regulation have been abolished, which financially relieved small entrepises in particular / This has not happened: Not a single regulation has been abolished, but the programme has created additional costs]

Paragraphs: A EU programme for more efficiency in legislation has [led to less regulation and financial relief for citizens and businesses / has not led to less regulation, but higher costs]. This is the result of an investigation by [source]. In the years of 2015 and 2016, the working group 'Refit' made 119 proposals to the Commission how EU regulations could be repealed or modified. [Of the 53 proposed modifications and the 66 pieces of regulation to be abolished, most were already follwed through. Only eight pieces of regulation remain to be repealed. / Of these, only the 53 proposed modifications were implemented. Those 66 pieces of regulation that were supposed to be abolished exist until today].

[According to the Commissions estimations, the 'Refit' changes could mean yearly savings for citizens and entreprises of 1.5 billion Euros alone. In comparison, the programme 'Refit' has only produced costs of 5 million Euros. Small and medium business owners interviewed by [source] have confirmed that many of the repealed rules could mean financial relief. / The working group, however, produced additional costs for staff and technical infrastructure of 25 million Euros. Via the EU budget, Germany contributed 3.8 million.]

The programme 'Refit' was born in 2015 to make EU law "simpler and less costly." Regulation can be regularly examined and changed or repealed as needed. This is meant to cut red tape and reduce costs for small entreprises in particular. Through an online platform, citizens, business and member states can make proposals on modifications and repeals. [/ Why the Commission has not repealed a single legislation during the first two years of Refit's existence although there is a choice of over 60 pieces of regulation is uncelar. The Commission declined to comment questions on the investigation from [source].]

4.5   True control story

Headline: State parliament election in North Rhine-Westphalia: The Free Democratic Party gains 28 seats
Teaser: The official final result is confirmed: Free Democratic Party gets 28 out of 199 seats in North Rhine-Westphalia parliamentary elections.

(a) Real source, left-wing content

(b) Real source, right-wing content

(c) Fake source, right-wing content

(d) Fake source, left-wing content

Figure A5: Example of screenshots used in Study 1

5 Source pre-testing

A list of 30 sources, including the real source later used in the experiment (Tagesschau) was pre-tested before Study 1. Figure A7 shows the percentages of people knowing a source, Figure A8 average trust scores per source.
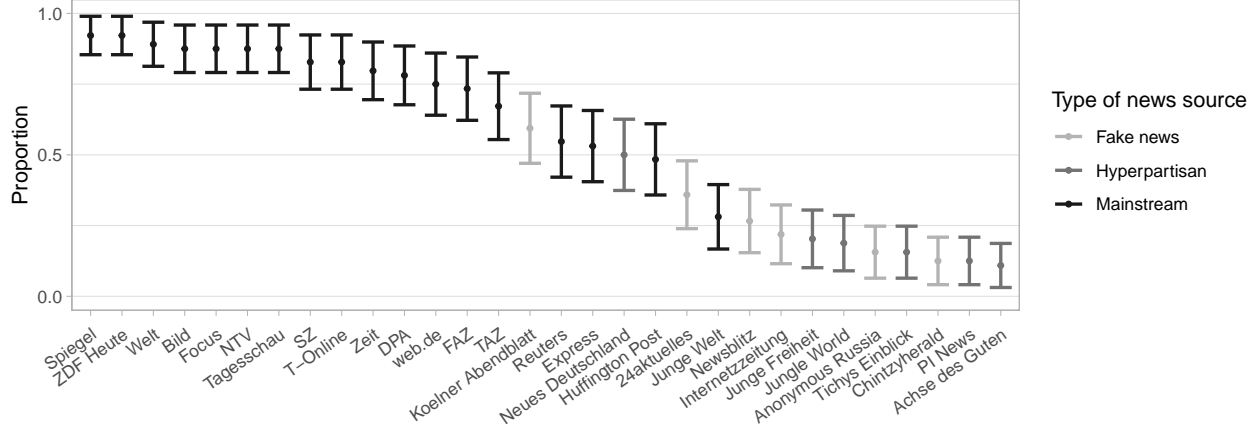
Figure A7: Source knowledge pre-test Study 1
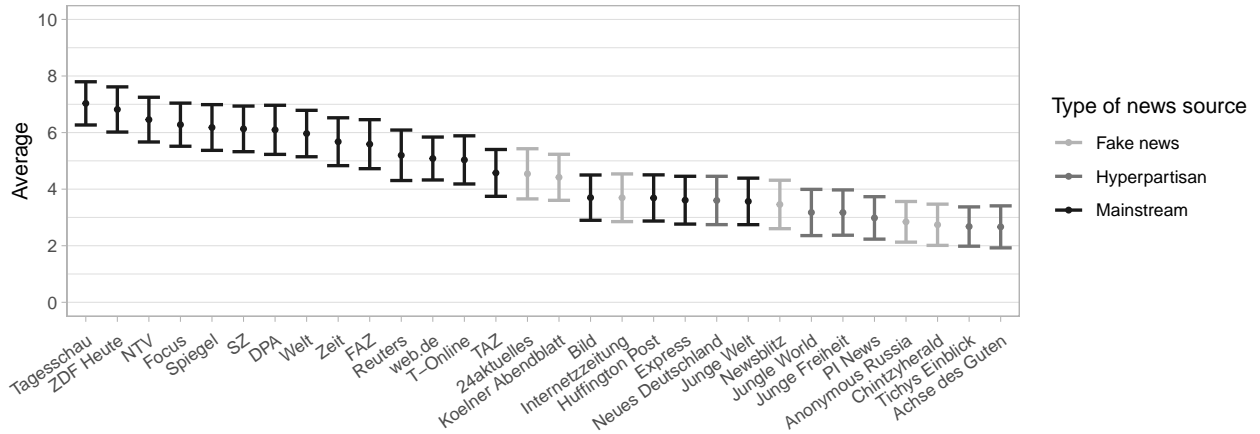
Figure A8: Source trust pre-test Study 1

6 Power analysis

Below, I present a simulation to estimate the statistical power to detect true effects with the target sample size of 400. Similar to the logic proposed by Blair et al. (2019), I start by defining "true" treatment means that reflect my expectations, and a normally distributed individual error and a normally distributed attitude variable. Since two of the hypotheses suggest an interaction with this attitude dimension, I define potential outcomes as a function of treatment and individual attitude position. In the simulation, treatments are then assigned randomly 250 times, and each time the regressions pertinent to hypotheses H1, H2, H3 are run.

The target sample size is sufficiently large to detect small effects predicted by hypotheses H1 and H2: In over

95 percent of simulations, the respective regression terms are statistically significant. The power to detect the effect predicted by H3 is much smaller. However, for moderate effect sizes, the regression term testing H3 turns out statistically significant in more than 90 percent of simulations.

```
# Data-generating model

n_sample <- 400

data_sim <- data.frame(attitude = rnorm(n_sample, 0, 1.5),
                       error = rnorm(n_sample, 0, 0.55)) # assuming prognostic covariates

## Small effect sizes

### Treatment means (Content treatment (A): 0 = left-wing; 1 = right-wing;
### Source treatment (B): 0 = low-credibility, 1 = high-credibility)

belief_A_0_B_0_mean <- -0.125
belief_A_0_B_1_mean <- 0.125
belief_A_1_B_0_mean <- -0.125
belief_A_1_B_1_mean <- 0.125

### Potential outcomes reflecting interaction hypotheses

data_sim_small <- data_sim %>%
  mutate(belief_A_0_B_0 = belief_A_0_B_0_mean - 0.10*attitude + error,
         belief_A_0_B_1 = belief_A_0_B_1_mean - 0.05*attitude + error,
         belief_A_1_B_0 = belief_A_1_B_0_mean + 0.10*attitude + error,
         belief_A_1_B_1 = belief_A_1_B_1_mean + 0.05*attitude + error)

## Moderate effect sizes

### Treatment means (Content treatment (A): 0 = left-wing; 1 = right-wing;
### Source treatment (B): 0 = low-credibility, 1 = high-credibility)

belief_A_0_B_0_mean <- -0.25
belief_A_0_B_1_mean <- 0.25
belief_A_1_B_0_mean <- -0.25
belief_A_1_B_1_mean <- 0.25

### Potential outcomes reflecting interaction hypotheses

data_sim_mod <- data_sim %>%
  mutate(belief_A_0_B_0 = belief_A_0_B_0_mean - 0.20*attitude + error,
         belief_A_0_B_1 = belief_A_0_B_1_mean - 0.05*attitude + error,
         belief_A_1_B_0 = belief_A_1_B_0_mean + 0.20*attitude + error,
         belief_A_1_B_1 = belief_A_1_B_1_mean + 0.05*attitude + error)

# Simulations

n_simulations <- 250

## Small effect sizes
```

```r
simulation_small <- data.frame(index = 1:n_simulations,
                        source_coeff = NA, source_se = NA, source_p = NA,
                        content_att_coeff = NA, content_att_se = NA, content_att_p = NA,
                        content_source_att_coeff = NA, content_source_att_se = NA,
                        content_source_att_p = NA)

for (i in 1:n_simulations) {

  # Simulate random treatment assignment
  data_sim_assigned <- data_sim_small %>%
    mutate(content = sample(0:1, n_sample, replace = TRUE),
           source = sample(0:1, n_sample, replace = TRUE)) %>%
    mutate(belief = case_when(content == 0 & source == 0 ~ belief_A_0_B_0,
                              content == 0 & source == 1 ~ belief_A_0_B_1,
                              content == 1 & source == 0 ~ belief_A_1_B_0,
                              content == 1 & source == 1 ~ belief_A_1_B_1))

  # Regressions for three different hypotheses
  reg_h1 <- summary(glm(belief ~ source,
                        data = data_sim_assigned))$coefficients
  simulation_small[i, "source_coeff"] <- reg_h1["source", "Estimate"]
  simulation_small[i, "source_se"] <- reg_h1["source", "Std. Error"]
  simulation_small[i, "source_p"] <- reg_h1["source", "Pr(>|t|)"]
  reg_h2 <- summary(glm(belief ~ attitude*content,
                        data = data_sim_assigned))$coefficients
  simulation_small[i, "content_att_coeff"] <- reg_h2["attitude:content", "Estimate"]
  simulation_small[i, "content_att_se"] <- reg_h2["attitude:content", "Std. Error"]
  simulation_small[i, "content_att_p"] <- reg_h2["attitude:content", "Pr(>|t|)"]
  reg_h3 <- summary(glm(belief ~ attitude*content*source,
                        data = data_sim_assigned))$coefficients
  simulation_small[i, "content_source_att_coeff"] <-
    reg_h3["attitude:content:source", "Estimate"]
  simulation_small[i, "content_source_att_se"] <-
    reg_h3["attitude:content:source", "Std. Error"]
  simulation_small[i, "content_source_att_p"] <-
    reg_h3["attitude:content:source", "Pr(>|t|)"]
}

# prop.table(table(simulation_small$source_p < 0.05))
# prop.table(table(simulation_small$content_att_p < 0.05))
# prop.table(table(simulation_small$content_source_att_p < 0.05))

## Moderate effect sizes

simulation_mod <- data.frame(index = 1:n_simulations,
                        source_coeff = NA, source_se = NA, source_p = NA,
                        content_att_coeff = NA, content_att_se = NA, content_att_p = NA,
                        content_source_att_coeff = NA, content_source_att_se = NA,
                        content_source_att_p = NA)

for (i in 1:n_simulations) {
```

```
  # Simulate random treatment assignment
  data_sim_assigned <- data_sim_mod %>%
    mutate(content = sample(0:1, n_sample, replace = TRUE),
           source = sample(0:1, n_sample, replace = TRUE)) %>%
    mutate(belief = case_when(content == 0 & source == 0 ~ belief_A_0_B_0,
                              content == 0 & source == 1 ~ belief_A_0_B_1,
                              content == 1 & source == 0 ~ belief_A_1_B_0,
                              content == 1 & source == 1 ~ belief_A_1_B_1))

  # Regressions for three different hypotheses
  reg_h1 <- summary(glm(belief ~ source,
                        data = data_sim_assigned))$coefficients
  simulation_mod[i, "source_coeff"] <- reg_h1["source", "Estimate"]
  simulation_mod[i, "source_se"] <- reg_h1["source", "Std. Error"]
  simulation_mod[i, "source_p"] <- reg_h1["source", "Pr(>|t|)"]
  reg_h2 <- summary(glm(belief ~ attitude*content,
                        data = data_sim_assigned))$coefficients
  simulation_mod[i, "content_att_coeff"] <- reg_h2["attitude:content", "Estimate"]
  simulation_mod[i, "content_att_se"] <- reg_h2["attitude:content", "Std. Error"]
  simulation_mod[i, "content_att_p"] <- reg_h2["attitude:content", "Pr(>|t|)"]
  reg_h3 <- summary(glm(belief ~ attitude*content*source,
                        data = data_sim_assigned))$coefficients
  simulation_mod[i, "content_source_att_coeff"] <-
    reg_h3["attitude:content:source", "Estimate"]
  simulation_mod[i, "content_source_att_se"] <-
    reg_h3["attitude:content:source", "Std. Error"]
  simulation_mod[i, "content_source_att_p"] <-
    reg_h3["attitude:content:source", "Pr(>|t|)"]
}

# prop.table(table(simulation_mod$source_p < 0.05))
# prop.table(table(simulation_mod$content_att_p < 0.05))
# prop.table(table(simulation_mod$content_source_att_p < 0.05))
```

7 Main results

7.1 Regression models

Table A7 reports the main regression results as referred to in the paper.

| | Belief | | | | | | | | | | | |
| | Welfare State | | | Domestic Security | | | Migration | | | European integration | | |
	H1a	H2a	H3a	H1a	H2a	H3a	H1a	H2a	H3a	H1a	H2a	H3a
Constant	−0.11	−0.04	−0.33**	−0.10	−0.14*	−0.15	0.13	−0.03	0.09	0.02	−0.09	−0.17
	(0.09)	(0.07)	(0.13)	(0.12)	(0.07)	(0.17)	(0.07)	(0.07)	(0.10)	(0.07)	(0.07)	(0.11)
Report (0 = left-wing)	0.25		0.44*	0.09		−0.02	−0.30**		−0.35*	0.01		0.20
	(0.13)		(0.18)	(0.15)		(0.22)	(0.10)		(0.14)	(0.10)		(0.15)
Attitude	−0.08*		−0.16**	0.05		0.05	−0.11***		−0.07	−0.02		0.01
	(0.04)		(0.05)	(0.04)		(0.06)	(0.03)		(0.04)	(0.03)		(0.04)
Report * Attitude	0.16**		0.22**	−0.04		−0.08	0.26***		0.23***	0.07		0.05
	(0.05)		(0.08)	(0.06)		(0.08)	(0.03)		(0.05)	(0.04)		(0.06)
Source (0 = fake)		0.08	0.42*		0.27**	0.09		0.07	0.09		0.18	0.36*
		(0.10)	(0.18)		(0.10)	(0.23)		(0.10)	(0.15)		(0.10)	(0.14)
Report * Source			−0.35			0.20			0.10			−0.36
			(0.26)			(0.29)			(0.20)			(0.20)
Attitude * Source			0.14			−0.01			−0.08			−0.05
			(0.07)			(0.08)			(0.05)			(0.06)
Report * Attitude * Source			−0.11			0.10			0.05			0.03
			(0.11)			(0.11)			(0.07)			(0.08)
Observations	405	418	405	408	418	408	408	418	408	398	418	398
Akaike Inf. Crit.	1,150.83	1,189.52	1,152.50	1,166.88	1,182.61	1,163.80	1,112.44	1,189.75	1,115.91	1,134.58	1,186.97	1,136.14

Note: *p<0.05; **p<0.01; ***p<0.001

Table A7: Study 1 effects on believing news reports

7.2 Marginal effects

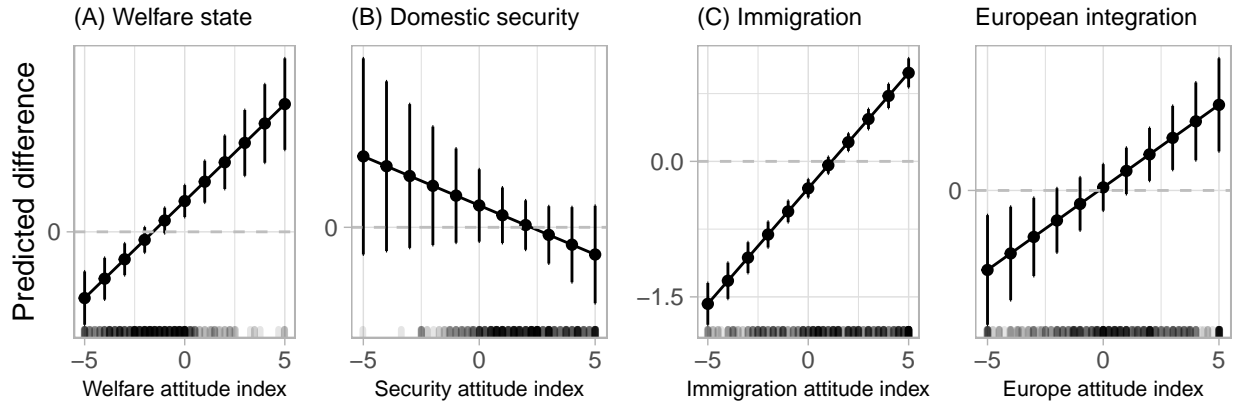Figure A9 shows predicted content treatment effects.

Figure A9: Marginal congruence effects on belief

15

8 Robustness checks

When re-running analyses for the welfare state topic with individual attitude items instead of the average index, the congruence interaction remains significant for all but one item (Table A8). Using individual attitude items for the domestic security topic does not change the main results (Table A9). Table A10 and Table A11 show that results for all topics remain unchanged when cheaters are excluded from the sample, and when those not using Facebook are excluded. Since topic order was not randomized, Table A12 tests whether being previously exposed to one type of content treatment systematically affects later belief, which is not the case.

	Belief							
	Attitude item used							
	Attitude 1		Attitude 2		Attitude 3		Attitude 4	
Constant	0.01	−0.12	−0.10	−0.26	−0.05	−0.13	−0.10	−0.26*
	(0.07)	(0.10)	(0.10)	(0.13)	(0.07)	(0.10)	(0.09)	(0.12)
Report (0 = left-wing)	0.09	0.21	0.22	0.37	0.09	0.15	0.16	0.37*
	(0.10)	(0.15)	(0.15)	(0.21)	(0.10)	(0.15)	(0.13)	(0.18)
Attitude	−0.01	−0.02	−0.05	−0.08*	−0.07***	−0.08*	−0.06*	−0.10**
	(0.03)	(0.04)	(0.03)	(0.04)	(0.03)	(0.03)	(0.03)	(0.04)
Report * Attitude	0.09**	0.10*	0.09*	0.13*	0.06	0.05	0.07*	0.13*
	(0.04)	(0.05)	(0.04)	(0.06)	(0.04)	(0.05)	(0.04)	(0.05)
Source (0 = fake)		0.25		0.39		0.18		0.34
		(0.15)		(0.21)		(0.15)		(0.18)
Report * Source		−0.22		−0.35		−0.14		−0.43
		(0.21)		(0.30)		(0.21)		(0.25)
Attitude * Source		0.03		0.08		0.02		0.09
		(0.05)		(0.06)		(0.05)		(0.05)
Report * Attitude * Source		−0.02		−0.09		0.001		−0.11
		(0.07)		(0.08)		(0.07)		(0.07)
Observations	397	397	397	397	389	389	375	375
Akaike Inf. Crit.	1,123.05	1,128.03	1,125.11	1,129.22	1,101.95	1,108.21	1,069.64	1,072.98
Note:						*p<0.05; **p<0.01; ***p<0.005		

Table A8: Study 1 welfare state report with individual attitude items

	Belief							
	Attitude item used							
	Attitude 1		Attitude 2		Attitude 3		Attitude 4	
Constant	0.03 (0.07)	−0.02 (0.10)	−0.02 (0.12)	−0.09 (0.18)	−0.14 (0.15)	−0.15 (0.21)	−0.14 (0.09)	−0.19 (0.12)
Report (0 = left-wing)	−0.02 (0.10)	−0.19 (0.14)	−0.005 (0.15)	−0.12 (0.22)	0.07 (0.18)	0.01 (0.26)	0.12 (0.11)	−0.06 (0.17)
Attitude	−0.03 (0.02)	−0.02 (0.03)	0.01 (0.03)	0.02 (0.05)	0.04 (0.04)	0.04 (0.05)	0.08*** (0.02)	0.08* (0.04)
Report * Attitude	0.005 (0.04)	−0.03 (0.05)	0.01 (0.04)	−0.02 (0.06)	−0.02 (0.05)	−0.07 (0.07)	−0.05 (0.03)	−0.05 (0.05)
Source (0 = fake)		0.09 (0.14)		0.13 (0.24)		0.02 (0.29)		0.09 (0.17)
Report * Source		0.32 (0.20)		0.21 (0.31)		0.11 (0.36)		0.32 (0.23)
Attitude * Source		−0.01 (0.05)		−0.01 (0.06)		0.002 (0.07)		0.005 (0.05)
Report * Attitude * Source		0.07 (0.07)		0.05 (0.09)		0.09 (0.09)		0.01 (0.07)
Observations	404	404	397	397	400	400	395	395
Akaike Inf. Crit.	1,152.88	1,149.65	1,130.38	1,128.43	1,138.16	1,135.61	1,116.07	1,114.15

Note: *p<0.05; **p<0.01; ***p<0.005

Table A9: Study 1 domestic security report with individual attitude items

	Belief											
	Welfare State			Domestic Security			Migration			European integration		
	H1a	H2a	H3a	H1a	H2a	H3a	H1a	H2a	H3a	H1a	H2a	H3a
Constant	−0.13 (0.09)	−0.07 (0.07)	−0.36** (0.13)	−0.04 (0.12)	−0.14 (0.07)	−0.19 (0.16)	0.12 (0.07)	−0.03 (0.07)	0.10 (0.10)	0.02 (0.07)	−0.10 (0.07)	−0.17 (0.11)
Report (0 = left-wing)	0.26* (0.13)		0.47* (0.19)	0.02 (0.15)		−0.03 (0.22)	−0.29** (0.10)		−0.34* (0.15)	−0.02 (0.10)		0.17 (0.15)
Attitude	−0.06 (0.04)		−0.14* (0.06)	0.03 (0.04)		0.08 (0.06)	−0.11*** (0.03)		−0.08* (0.04)	−0.03 (0.03)		0.01 (0.04)
Report * Attitude	0.14** (0.06)		0.20* (0.08)	−0.02 (0.06)		−0.09 (0.08)	0.26*** (0.04)		0.25*** (0.05)	0.09* (0.04)		0.05 (0.06)
Source (0 = fake)		0.09 (0.10)	0.42* (0.18)		0.28*** (0.10)	0.30 (0.24)		0.04 (0.10)	0.05 (0.15)		0.16 (0.10)	0.34* (0.15)
Report * Source			−0.36 (0.26)			0.06 (0.30)			0.09 (0.21)			−0.35 (0.21)
Attitude * Source			0.13 (0.08)			−0.11 (0.09)			−0.06 (0.05)			−0.06 (0.06)
Report * Attitude * Source			−0.09 (0.11)			0.16 (0.11)			0.04 (0.07)			0.06 (0.08)
Observations	388	399	388	389	399	389	389	399	389	379	399	379
Akaike Inf. Crit.	1,101.53	1,131.63	1,103.65	1,100.00	1,114.45	1,095.84	1,055.67	1,132.01	1,061.19	1,057.88	1,111.54	1,060.24

Note: *p<0.05; **p<0.01; ***p<0.005

Table A10: Study 1 without cheating suspects

	Belief											
	Welfare State			Domestic Security			Migration			European integration		
	H1a	H2a	H3a	H1a	H2a	H3a	H1a	H2a	H3a	H1a	H2a	H3a
Constant	−0.09 (0.10)	−0.01 (0.08)	−0.22 (0.15)	−0.03 (0.13)	−0.14 (0.08)	−0.08 (0.18)	0.14 (0.09)	−0.05 (0.08)	−0.01 (0.14)	0.07 (0.08)	−0.09 (0.08)	−0.09 (0.13)
Report (0 = left-wing)	0.28 (0.15)		0.35 (0.21)	−0.01 (0.18)		−0.19 (0.26)	−0.31* (0.12)		−0.18 (0.18)	−0.02 (0.12)		0.07 (0.18)
Attitude	−0.06 (0.04)		−0.12 (0.06)	0.04 (0.05)		0.06 (0.07)	−0.09*** (0.03)		−0.04 (0.05)	−0.04 (0.03)		−0.02 (0.06)
Report * Attitude			0.23 (0.21)			0.11 (0.26)			0.23 (0.18)			0.27 (0.17)
Source (0 = fake)			0.11 (0.09)			−0.04 (0.10)			−0.10 (0.06)			−0.03 (0.07)
Report * Source	0.14* (0.06)		0.21* (0.09)	−0.02 (0.07)		−0.07 (0.10)	0.24*** (0.04)		0.20*** (0.06)	0.07 (0.05)		0.07 (0.07)
Attitude * Source		0.05 (0.11)			0.31** (0.11)			0.08 (0.11)			0.19 (0.11)	
Report * Attitude * Source			−0.13 (0.30)			0.29 (0.35)			−0.20 (0.25)			−0.09 (0.25)
Constant			−0.12 (0.13)			0.15 (0.13)			0.07 (0.08)			−0.03 (0.10)
Observations	304	311	304	303	311	303	305	311	305	296	311	296
Akaike Inf. Crit.	872.62	894.02	878.32	871.69	882.86	865.88	845.81	894.98	850.87	852.09	893.45	856.03

Note: *p<0.05; **p<0.01; ***p<0.005

Table A11: Study 1 Facebook users only

	Belief		
	Domestic security	Migration	European integration
Welfare state content treatment	0.03 (0.10)	0.04 (0.14)	0.25 (0.20)
Domestic security content treatment		0.11 (0.14)	0.33 (0.19)
Migration content treatment			0.18 (0.19)
Welfare state * Domestic security		−0.30 (0.20)	−0.44 (0.28)
Welfare state * Migration			−0.10 (0.28)
Domestic security * Migration			−0.41 (0.27)
Welfare state * Domestic security * Migration			0.19 (0.39)
Constant	−0.02 (0.07)	0.001 (0.09)	−0.16 (0.13)
Observations	418	418	418
Akaike Inf. Crit.	1,190.13	1,190.61	1,195.77

Note: *p<0.05; **p<0.01; ***p<0.001

Table A12: Study 1 effects of report order

9 Heterogeneity

Figures A10 to A13 show heterogeneity of the congruence effect across the four topics. Figures A14 to A17 illustrate heterogeneity for the source effect. Each figure shows the covariates most "important" for that tree according to the causal forest algorithm (Athey et al., 2019; Wager & Athey, 2018).
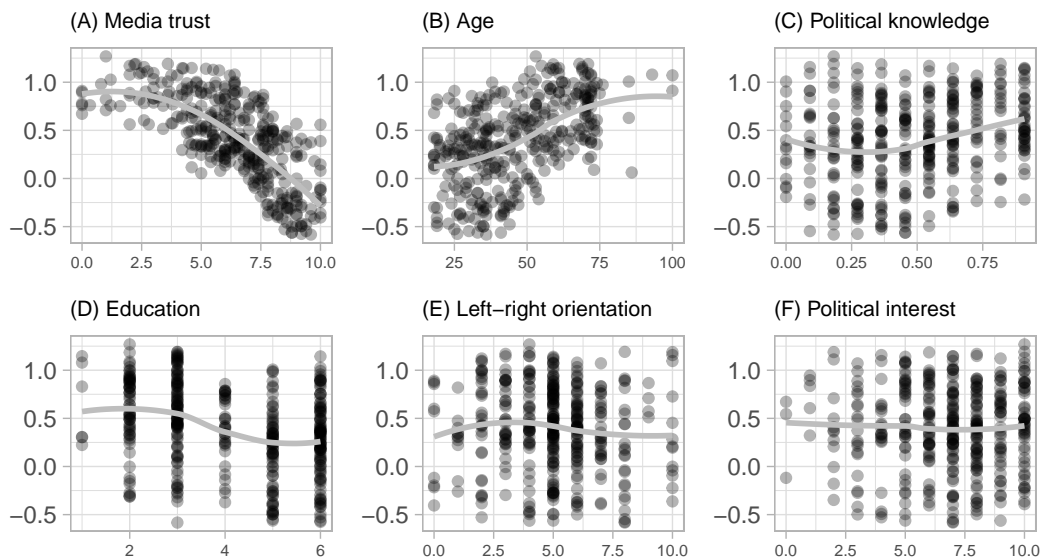

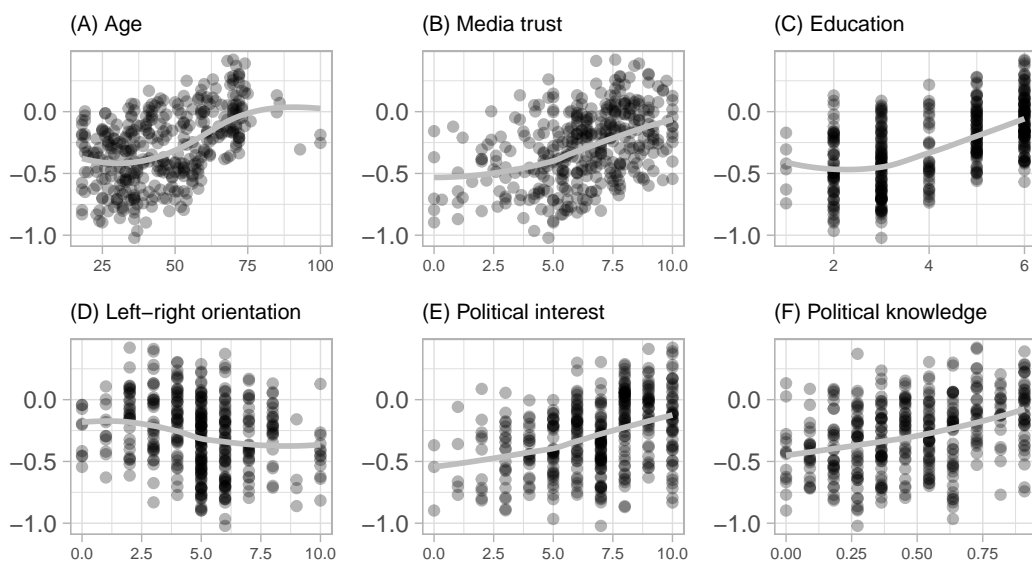Figure A10: Congruence treatment heterogeneity (welfare state)

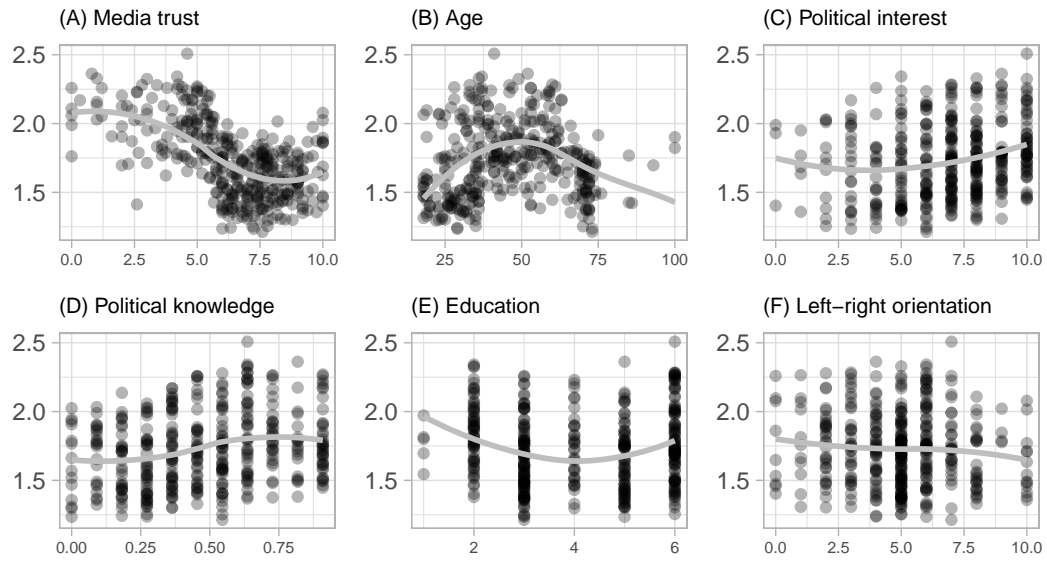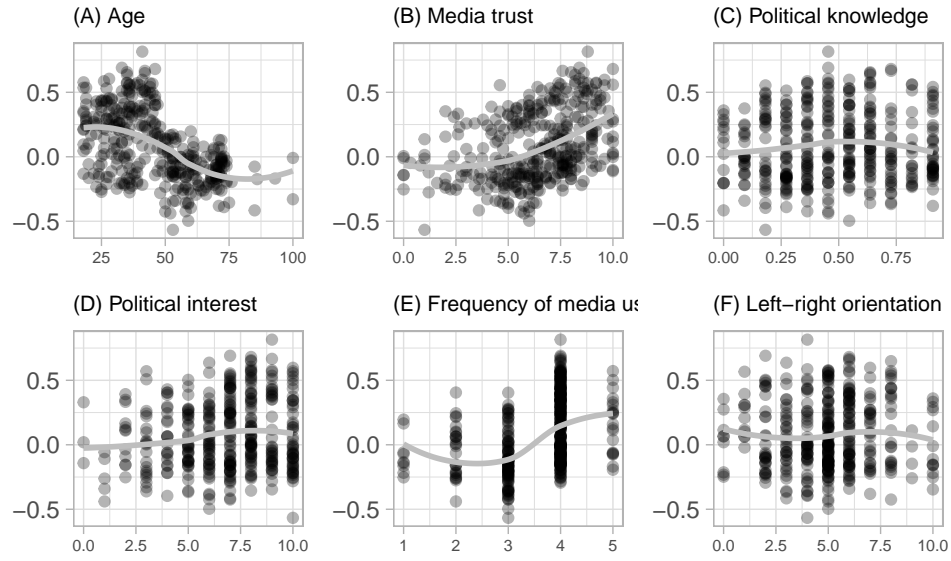Figure A11: Congruence treatment heterogeneity (domestic security)

Figure A12: Congruence treatment heterogeneity (immigration)
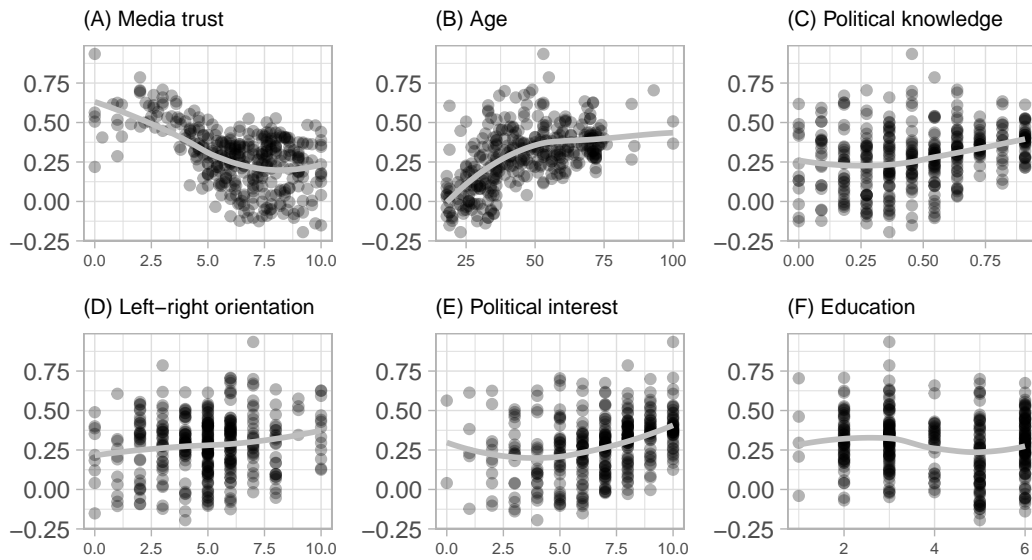
Figure A13: Congruence treatment heterogeneity (European integration)

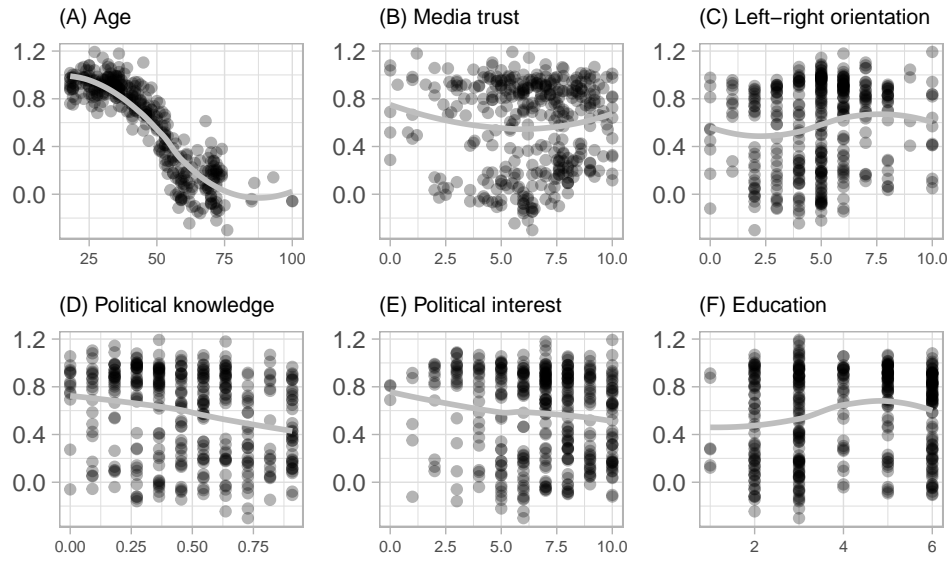Figure A14: Source treatment heterogeneity (welfare state)

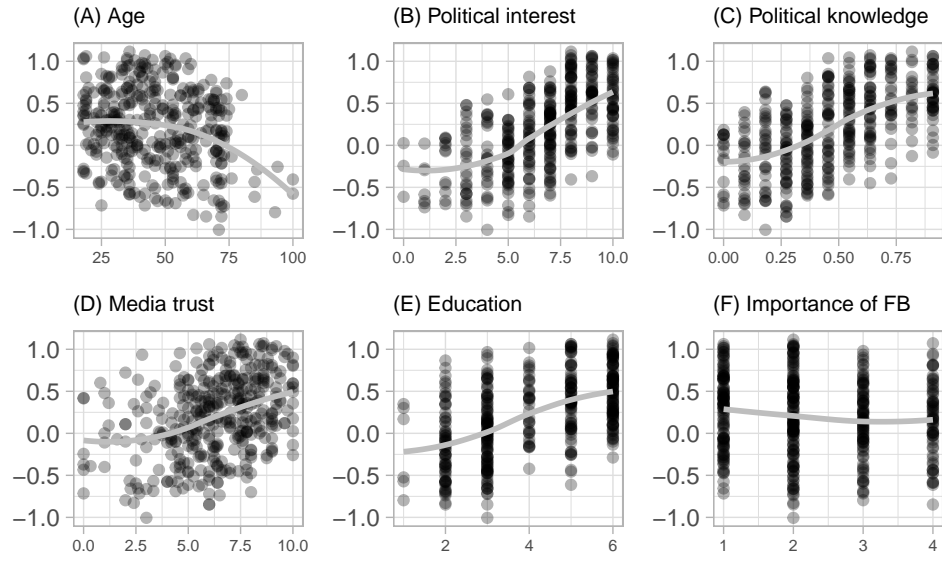Figure A15: Source treatment heterogeneity (domestic security)

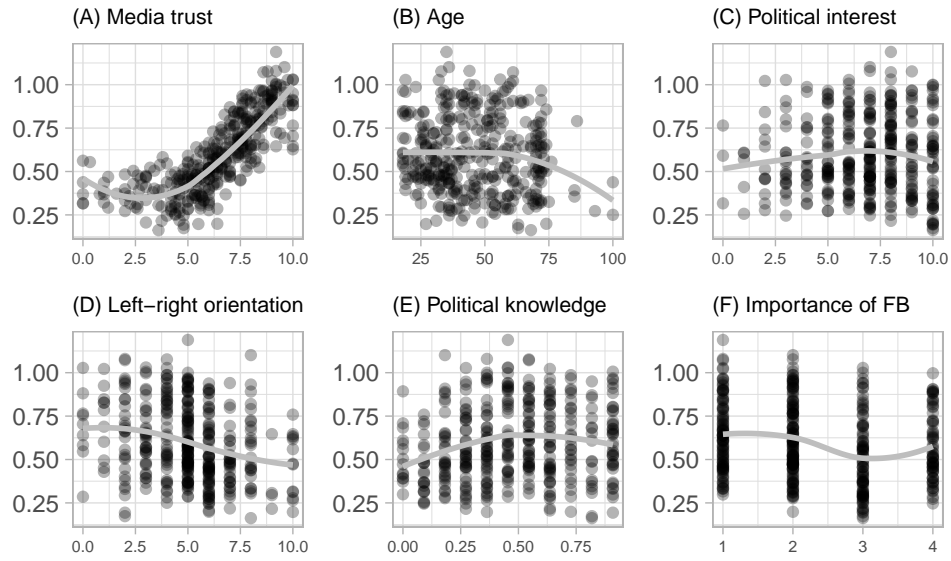Figure A16: Source treatment heterogeneity (immigration)

Figure A17: Source treatment heterogeneity (European integration)

References

Athey, S., Tibshirani, J., & Wager, S. (2019). Generalized random forests. *Annals of Statistics*, *47*(2), 1179–1203. https://doi.org/10.1214/18-AOS1709

Blair, G., Cooper, J., Coppock, A., & Humphreys, M. (2019). Declaring and diagnosing research designs. *American Political Science Review*, *113*(3), 838–859. https://doi.org/10.1017/S0003055419000194

Mutz, D. C., & Pemantle, R. (2015). Standards for Experimental Research: Encouraging a Better Understanding of Experimental Methods. *Journal of Experimental Political Science*, *2*, 192–215.

Wager, S., & Athey, S. (2018). Estimation and Inference of Heterogeneous Treatment Effects using Random Forests. *Journal of the American Statistical Association ISSN:*, *113*(523).