Development of the Value–Instantiating Beliefs Questionnaire
Report on Pretest 1

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1. Design

I have collected responses to an internet–based survey at a Russian forum. All the materials were translated into Russian. The questionnaire was structured the following way:

Part I. These are the questions that were necessary for analysis. Participants who did not complete Part I were excluded from the analysis as per informed consent agreement.

1. Sociodemographics I
    a. Gender
    b. Age
2. PVQ–RR (57 items)
3. VIB questionnaires (23 items each)
    a. Target behavior 1, voting for Vladimir Putin
    b. Target behavior 2, donating to Alexey Navalny's fund
    c. Target behavior 3, immigrating to Western Europe
    d. Target behavior 4, cheating on a university exam
4. Dependent variables
    a. Attitude to behavior, for target behaviors 1–4, 3 items each.
    b. Behavioral intention for target behaviors 1–4, 3 items each.
5. One–item measures
    a. Past behavior for target behaviors 1–4
    b. One–point attitudes to Vladimir Putin and Alexey Navalny
    c. Approval of Vladimir Putin
    d. Approval of the country's direction
6. Sociodemographics II
    a. Education
    b. Religiosity

Part II. At the end of Part I, participants were asked if they would like to answer additional questions.

7. VIB questionnaire for target behavior 4, short form (11 items)
8. Open–ended VIB questions for target behavior 1 (*for example: "Earlier in the survey, you have indicated that if you vote for Vladimir Putin, that would make the country more stable and secure. Please, in one or two sentences, clarify why you believe that")*.
9.

2. Analytical plan

2.1 First, I was interested in checking whether there is a predicted interaction between VIBs and values in predicting an attitude.

2.1.2 Four regressions, in which I regressed an attitude towards each of the four behaviors onto 10 values (uncentered), VIBs, and their respective interactions.
2.1.3 Separate regressions for each value−VIB pair with 10 values. Additionaly, marginal effects plots − to see whether I get predicted estimates of effects – positive at positive VIB, negative at negative VIB, and no effect at neutral.
2.1.4 Separate regressions for each of the 23 VIB items, also with marginal effects plots.

2.2 Second, I tried to understand why some VIB−value pairs produce expected patterns of relationships and others don't.

2.2.2 Regression of the effect size of the interaction onto properties of my variables: standard deviations of values and VIBs, their inter−correlations, percentage of neutral VIB responses, split between positive and negative VIBs, and the main effect of the value.
2.2.3 Content analysis of open−ended questions.

2.3 Auxiliary hypotheses testing

2.3.2 Correlations between average absolute VIB scores and their respective values
2.3.3 Multi−dimensional scaling of VIB scores

3. Sample description

A total of 535 participants completed the survey. 21 participants were dropped from quantitative analyses, as they recommended not using their results. 154 participants were dropped because they failed both attention checks that were embedded in the PVQ. The resulting sample size for quantitative analyses was 360.

Tables 1 through 4 present sociodemographic characteristics of the sample, attitudes towards target behaviors, political attitudes, and VIBs.

Table 1. Sociodemographic characteristics of the sample

N	**360**
Gender Male, *n (%)*	318, (88.3)
Age, years, *Mean (SD)*	21.8 (5.0)
Education, secondary, *n (%)*	80 (29.5)
Education, professional, *n (%)*	51 (18.8)
Education, university, *n (%)*	140 (51.7)
Religiosity, 5 point, *Mean (SD)*	1.7 (1.1)

Table 2. Attitudes and behavioral intentions to the target behaviors

	Attitude (7 point)	Behavioral intention (5 point)
	Mean (SD)	Mean (SD)
Voting for Vladimir Putin	1.84 (1.36)	1.47 (.79)
Donating to Alexey Navalny	3.60 (1.57)	2.01 (1.02)
Immigrating to Western Europe	5.23 (1.39)	3.20 (1.09)
Cheating on a university exam	3.61 (1.48)	2.82 (1.14)

Table 3. Political attitudes

Do you approve of Vladimir Putin?	
Yes, *n (%)*	20 (5.6)
No, *n (%)*	236 (65.6)
Don't know / Prefer not to answer, *n (%)*	104 (29.9)
Do you approve of the country's direction?	
Yes, *n (%)*	10 (2.8)
No, *n (%)*	280 (77.8)
Don't know / Prefer not to answer, *n (%)*	69 (19.2)
Putin would be a good president, 5 point, *Mean (SD)*	1.70 (0.91)
Navalny would be a good president, 5 point, *Mean (SD)*	2.50 (1.19)

Table 4. VIBs towards target behaviors, −3 to +3.

	Voting for Vladimir Putin Mean (SD)	Donating to Alexey Navalny Mean (SD)	Immigrating to Western Europe Mean (SD)	Cheating on a university exam Mean (SD)
SE	−1.18 (1.49)	−.18 (1.10)	.49 (1.15)	−.31 (.83)
CO	−.90 (1.37)	−.43 (1.09)	−.24 (1.28)	−.78 (1.23)
TR	.04 (1.46)	−.69 (1.16)	−.70 (1.26)	−.41 (1.16)
BE	−.73 (1.17)	−.18 (.99)	−.13 (1.41)	−.13 (.77)
UN	−1.22 (1.06)	.23 (.88)	.37 (.81)	−.18 (.64)
SD	−1.29 (1.38)	.05 (1.19)	1.03 (1.38)	−.10 (1.03)
ST	−1.16 (1.29)	.22 (1.15)	1.66 (1.39)	.31 (1.24)
HE	−1.47 (1.33)	−.02 (1.28)	1.49 (1.53)	.10 (1.37)
AC	−.92 (1.17)	−.21 (1.08)	1.11 (1.33)	−.98 (1.27)
PO	−.78 (.98)	.02 (.82)	.65 (1.05)	−.06 (.62)

4. Questionnaire Description

4.1 Distribution of Responses

Frequencies and distributions of responses to the specific items of VIB questionnaire can be found in the Appendix, tables A1 through A4.

Response patterns varied for specific VIB items. Each individual item received from 11.9 to 91.9 neutral responses ("Neither/ Not applicable"), with an average of 51.4%. I believe that can be explained by varying degree of applicability of items to target behaviors.

4.2 Opinion Splits

Of the remaining non−neutral responses, the average distribution of responses into opposing categories was 24.2 to 75.8 percent. Of the 92 VIB questions asked, 18 achieved a split of 40/60, 28 achieved a split of 30/70, and 51 achieved a split of 20/80 percent.

4.3 Internal Reliability

Average Cronbach's alphas for the 10 VIB subscales ranged from .47 (Power) to .80 (Hedonism), with an average of .67. For details, see table A5.

4.4 Correlations with Theoretical DV's

Average correlation of VIB items with the attitude to the same object was .36, ranging from −.05 to .72.
As theoretically predicted, almost all correlations were positive: out of 92, only two were mildly negative, both with the VIB Humilty item (Item 5).

Average correlation of VIB items with the behavioral intention was .30, with the range of .00 to .63.

Item varied in the degree to which they are related to the DV's. The VIB items least related to attitudes were Humility, Tradition, and Conformity, and the VIB items most relate to attitudes were Hedonism, Achievement, and Self−Direction. The summary of correlations is presented in the Appendix table A6.

5. Full Regression (10 values)

I began the analysis by performing, for each of the target behaviors, a full regression, in which the predictors would be all 10 values (uncentered), all VIBs pertaining to the target behavior, and their interactions. The results are presented in Table 5. The model parameters (high R^2, high standard errors, few significant predictors) suggested an overspecification / multicollinearity problem. The predicted interactions did not show up – three were significant with effects in the predicted direction, two were significant with effects in the opposite direction, and the rest were not significant.

Of note in the results is the persistent strong main effect of the Hedonism VIB (performing the target behavior *would be fun, be a pleasant thing to do/let me enjoy life's pleasures*) on the attitude. These items seem to be too related to the attitude.

I plan to look into this model further to see which specific terms make it unstable, but for now I have abandoned this approach to look, instead, at specific value–VIB–attitude triads.

Table 5. Regression of attitudes towards target behaviors onto value scores (uncentered), VIBs, and their interactions.

DV	Attitude 1 (voting for V. Putin)		Attitude 2 (donating to A. Navalny)		Attitude 3 (immigrating to Europe)		Attitude 4 (cheating on an exam)	
	B	SE	B	SE	B	SE	B	SE
Values								
SE	.15	.13	−.27	.25	.01	.24	−.05	.32
CO	.08	.12	.31	.17	.05	.13	−.02	.16
TR	−.18	.10	−.13	.12	−.22*	.10	−.16	.14
BE	−.17	.16	.07	.21	−.35*	.14	−.06	.31
UN	.11	.16	.11	.28	.14	.28	−.18	.38
SD	−.02	.17	−.14	.27	−.37	.23	−.59	.33
ST	.19	.14	.23	.24	.49*	.22	.25	.20
HE	−.04	.12	−.17	.19	.09	.16	.13	.17
AC	−.14	.14	.30	.20	−.22	.18	.06	.14
PO	.06	.15	.03	.23	.62**	.20	.07	.31
VIBs								
SE	.33	.18	−.25	.28	.21	.23	−.10	.37
CO	.07	.11	.04	.16	−.06	.11	−.12	.15
TR	−.12	.07	−.08	.10	−.07	.08	−.04	.11
BE	−.18	.21	.05	.24	−.21	.14	−.06	.35
UN	.16	.20	.14	.26	−.17	.24	−.21	.38
SD	.33	.28	.19	.26	−.38	.21	−.45	.44
ST	.03	.17	.12	.24	.37	.15	.09	.19
HE	.60**	.19	.48*	.22	.48***	.14	.63**	.19
AC	−.20	.19	.51*	.21	−.06	.15	.45*	.19
PO	.06	.15	−.14	.22	.29	.06	−.09	.31
Interactions								
SE	−.04	.04	.05	.06	.00	.05	.05	.08
CO	−.01	.03	−.04	.04	.02	.03	.01	.04
TR	**.06***	.02	.01	.04	.02	.03	.02	.04
BE	.04	.05	−.03	.05	**.07***	.03	.03	.08
UN	−.06	.05	.01	.06	−.01	.06	.00	.10
SD	−.06	.05	.01	.06	**.08***	.04	.13	.08
ST	−.01	.04	−.02	.06	**−.08***	.04	−.04	.04
HE	.00	.04	.02	.05	−.01	.03	−.04	.04
AC	.04	.04	−.06	.05	.04	.03	−.04	.04
PO	−.02	.04	.00	.05	**−.10***	.04	.00	.08
Adjusted R^2	.51		.58		.60		.48	

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

6. Analysis by VIB (10 values)

To make sure the results are not biased by overfitting the model, I decided to look at specific value−VIB−attitude triads. 40 individual models of the form

$$\text{Attitude} = \text{Value} + \text{VIB} + \text{Value} * \text{VIB} + \text{error}$$

were tested. I expected to see a positive effect of the interaction (the value−attitude relationship being more positive at higher levels of VIB), a positive value effect estimate at VIB above centerpoint and a negative value effect estimate below centerpoint. I also expected that when the interaction is factored in, the main effect of the value should become negative, as it is calculated at 0 (or very negative) level of the VIB. The summary of the coefficients of the 40 models is presented in Table 6.

Out of 40 tests, 10 interactions were significant in the predicted direction (positive), and 2 were significant in the opposite direction (negative), both with the Hedonism VIB. Overall, the estimates of effects were trending in the predicted direction: out of 40 tests, 30 main effects of values are negative, 9 are positive, and 1 is zero. Out of 40 tests, 27 interaction effects are positive, 11 are negative, and 2 are zero

All significant interactions are plotted in Figures 1−4. Apart from two negative interactions with VIB−hedonism, 6 interactions agreed with the prediction, i.e. had a negative estimate of the effect of value at VIB −1SD, and a positive estimate of value at VIB +1SD. Four interactions deviated from the strong version of our hypothesis: all effects were either positive or negative, but they were more negative at VIB −1SD, and more positive at VIB +1SD.

Plotting the interactions at +/−1SD is not the most direct way to test the hypotheses, as these plots depend on the distributions of the VIBs. To visualize data more clearly, I have plotted marginal effects of value onto attitude at different levels of the VIB. These plots are presented in Figures 6 and 7.

Table 6. Summary of 40 independent regressions of attitudes towards target behavior onto one value (centered), relevant VIB, and their interaction.

	Attitude 1 (voting for V. Putin)			Attitude 2 (donating to A. Navalny)		
	Value B (SE)	VIB B (SE)	Interaction B (SE)	Value B (SE)	VIB B (SE)	Interaction B (SE)
SE	−.12 (.14)	.26 (.19)	.07 (.04)	−.50 (.36)	.22 (.41)	.07 (.09)
CO	−.08 (.14)	.13 (.14)	.07 (.04)	.26 (.26)	.44 (.24)	−.03 (.07)
TR	−.31** (.11)	−.21* (.08)	**.16*** (.03)**	−.80*** (.16)	−.20 (.15)	**.15** (.05)**
BE	−.35 (.22)	−.10 (.29)	**.13* (.07)**	−.30 (.31)	.32 (.34)	.08 (.07)
UN	−.14 (.63)	.86* (.21)	−.04 (.05)	−.47 (.34)	.29 (.30)	**.18* (.08)**
SD	−.15 (.15)	.52* (.26)	.00 (.05)	−.02 (.28)	.91** (.33)	−.01 (.06)
ST	−.14 (.14)	.09 (.18)	.04 (.04)	−.11 (.28)	.40 (.28)	.06 (.07)
HE	.12 (.10)	.98*** (.15)	**−.06* (.03)**	−.16 (.19)	.79*** (.22)	.02 (.05)
AC	−.32 (.17)	.10 (.22)	**.11* (.05)**	.09 (.22)	.91*** (.25)	−.01 (.06)
PO	−.13 (.16)	.42* (.17)	.04 (.05)	−.22 (.30)	.65* (.30)	.03 (.04)

	VIB 3 (immigrating to Europe)			VIB 4 (cheating on an exam)		
	Value B (SE)	VIB B (SE)	Interaction B (SE)	Value B (SE)	VIB B (SE)	Interaction B (SE)
SE	−.15 (.31)	.64* (.31)	.01 (.07)	.21 (.42)	.63 (.50)	.01 (.11)
CO	−.26 (.21)	.03 (.19)	.07 (.05)	−.55** (.20)	.02 (.20)	.10 (.06)
TR	−.96*** (.12)	−.35** (.11)	**.17*** (.03)**	−.61*** (.16)	−.08 (.14)	**.16*** (.04)**
BE	–1.06*** (.21)	−.62** (.22)	**.22*** (.05)**	−1.49*** (.35)	−.75 (.40)	**.33*** (.09)**
UN	−.25 (.39)	.21 (.34)	.10 (.25)	−.64 (.43)	.30 (.42)	.10 (.11)
SD	−.85*** (.25)	−.18 (.24)	**.15** (.05)**	−.12 (.34)	.67 (.42)	.02 (.08)
ST	.23 (.25)	.64*** (.17)	−.03 (.04)	.12 (.23)	.39 (.23)	−.01 (.05)
HE	.00 (.17)	.69*** (.14)	.00 (.03)	.40* (.17)	1.05*** (.19)	**−.08* (.04)**
AC	−.02 (.22)	.48** (.18)	.02 (.04)	.15 (.17)	.79*** (.22)	−.04 (.05)
PO	.26 (.27)	.67** (.21)	−.03 (.05)	.47 (.34)	.82*** (.32)	−.04 (.08)

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Interaction plots

Figure 1. Interaction plots of significant interactions from table 6. Attitude 1: voting for Vladimir Putin.

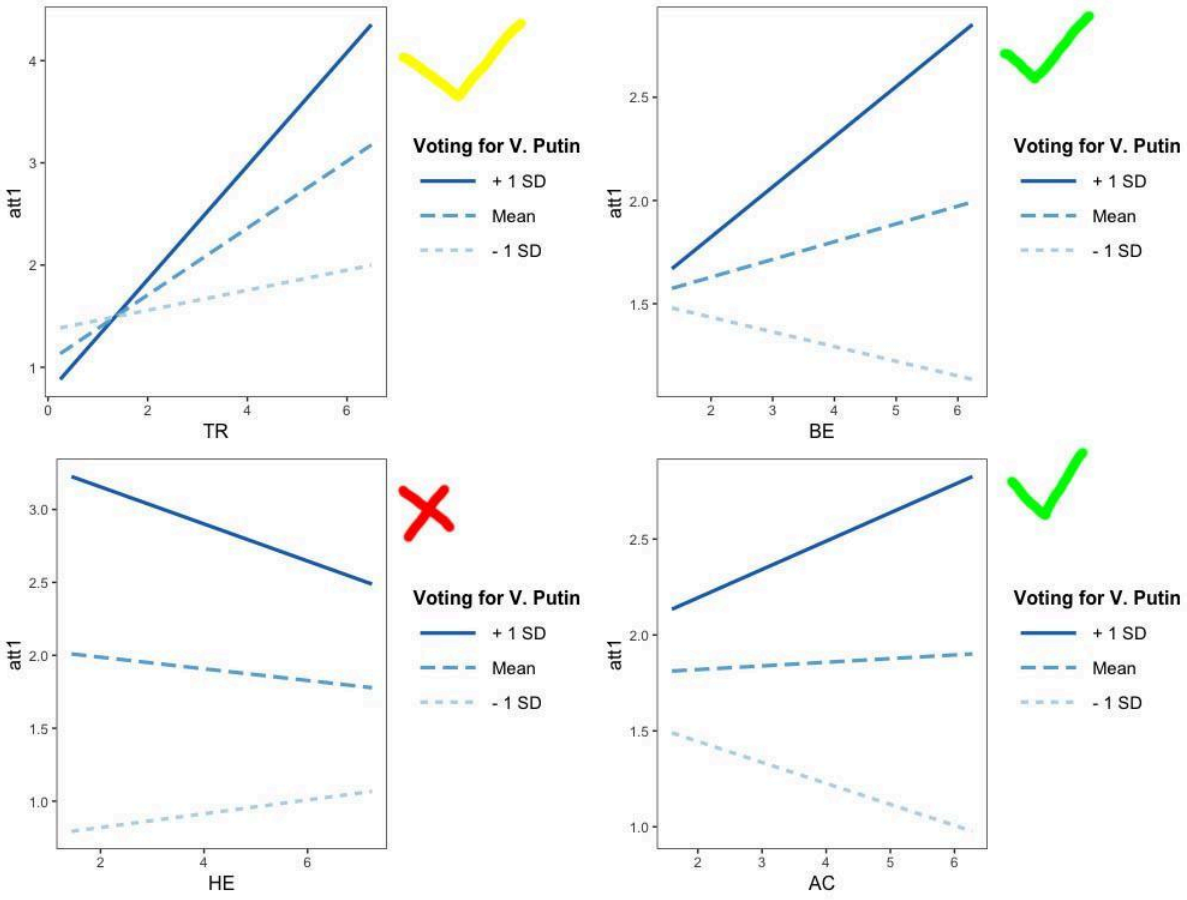


Figure 2. Interaction plots of significant interactions from table 6. Attitude 2: donating to Alexey Navalny's fund

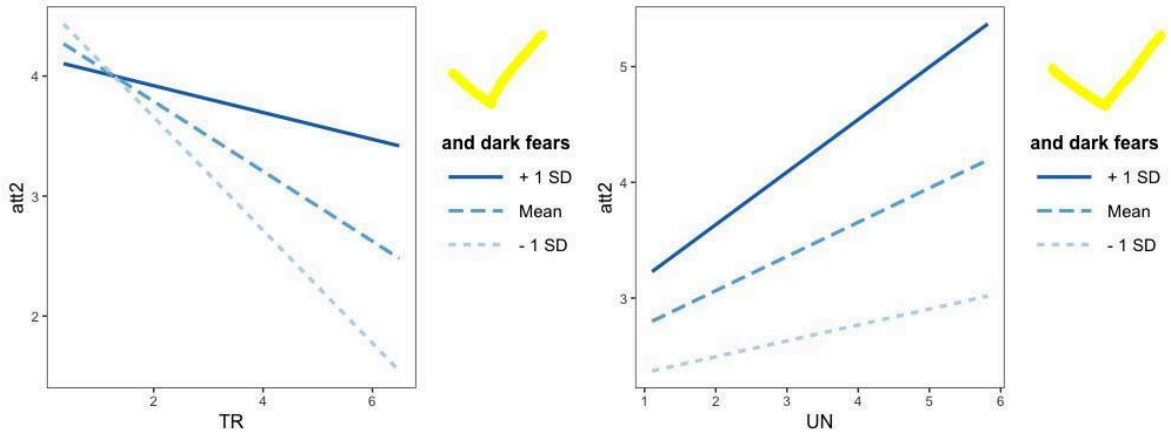


Figure 3. Interaction plots of significant interactions from table 7. Attitude 3: immigrating to Western Europe

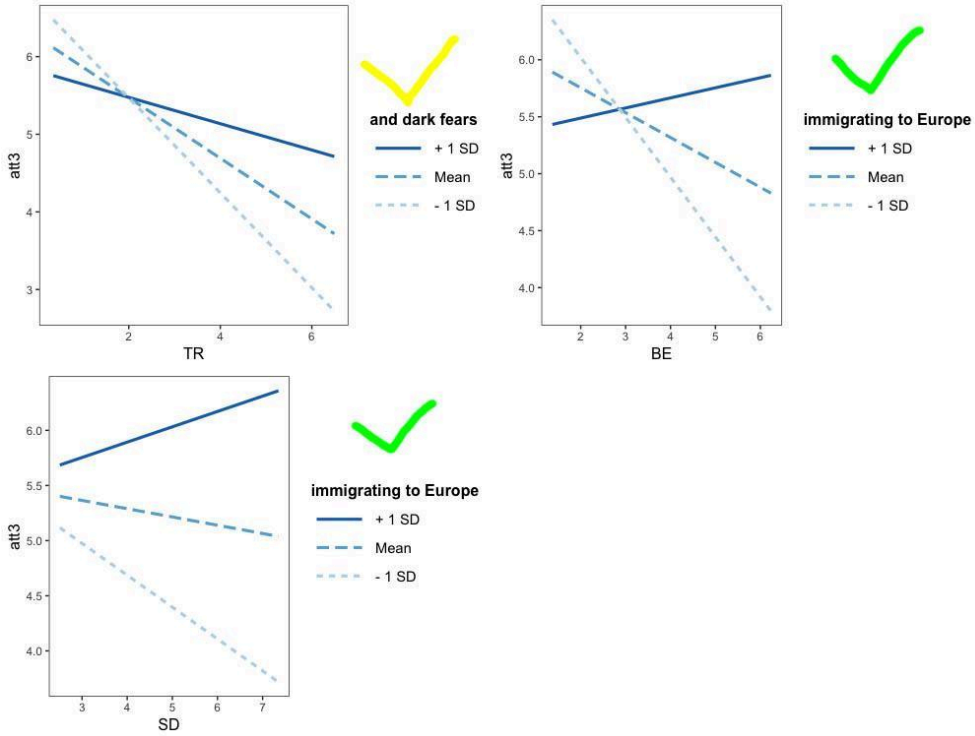
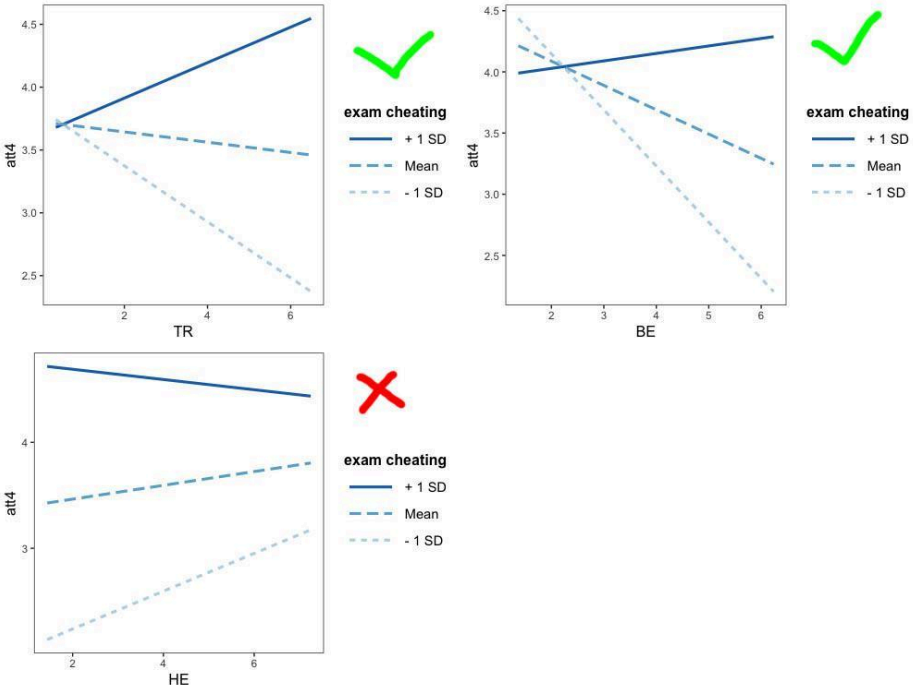


Figure 4. Interaction plots of significant interactions from table 6. Attitude 4: cheating on a university exam


4.5
4.0
3.5
3.0
2.5
att4
2
4
6
TR
exam cheating
+ 1 SD
Mean
- 1 SD
4.5
4.0
3.5
3.0
2.5
att4
2
3
4
5
6
BE
exam cheating
+ 1 SD
Mean
- 1 SD
4
3
att4
2
4
6
HE
exam cheating
+ 1 SD
Mean
- 1 SD

Interpreting marginal effect plots

These marginal effects plots have levels of the VIB on the x−axis and the estimated effect of the value on the y−axis. The band represents a 95% confidence interval. I use these plots to provide additional information about the interaction terms from Tables 6−8.

A plot that is ideally corresponding to our hypotheses is shown below. It satisfies the following criteria:

1) The angle of the line is positive: the more positive is the VIB, the more positive is the effect of value on the attitude
2) The estimate of the effect of the value at VIB levels below centerpoint (1 to 3) is negative.
3) The C.I. of the negative estimate does not include zero, meaning the negative effect of the value at negative VIB levels is significant.
4) The estimate of the effect of the value at VIB levels above centerpoint (5 to 7) is positive.
5) The C.I. of the positive estimate does not include zero, meaning the positive effect of the value at positive VIB levels is significant.
6) The effect estimate of the value at VIB centerpoint (4) includes zero.

Figure 5. A marginal effects plot that corresponds to the study's hypotheses.

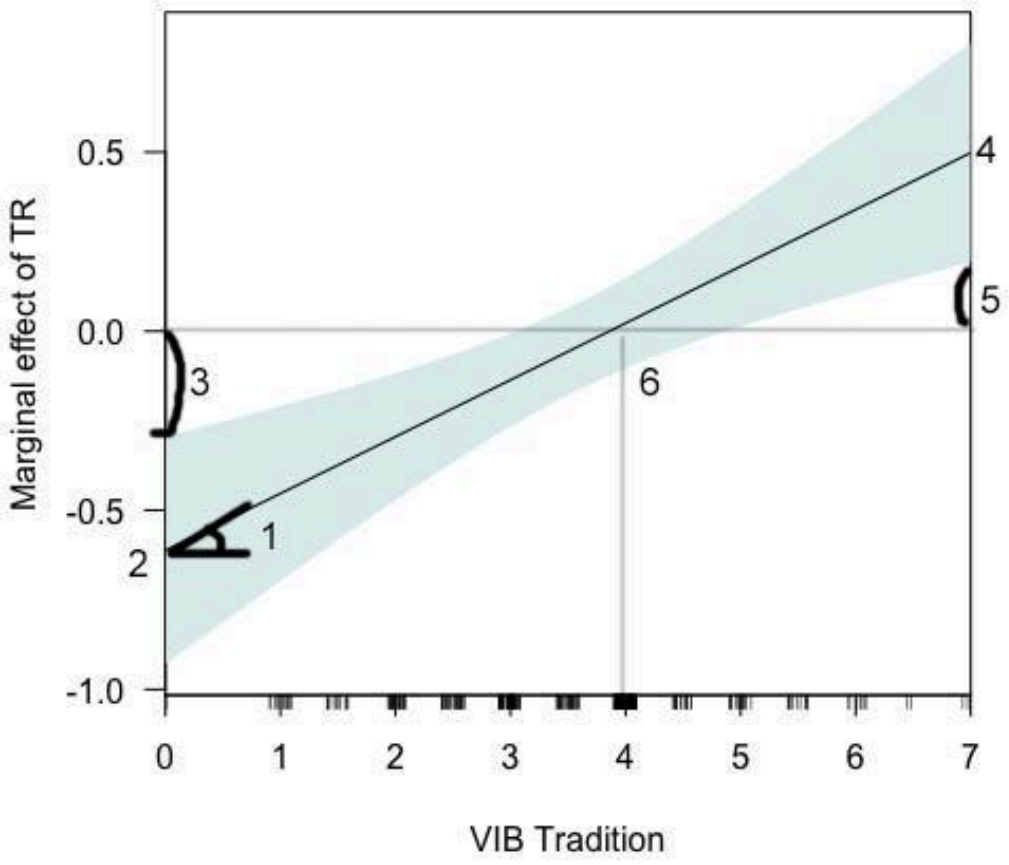


Figure 6. Marginal effect plots of the effect of ten value types over levels of relevant VIB. Security through Universalism.

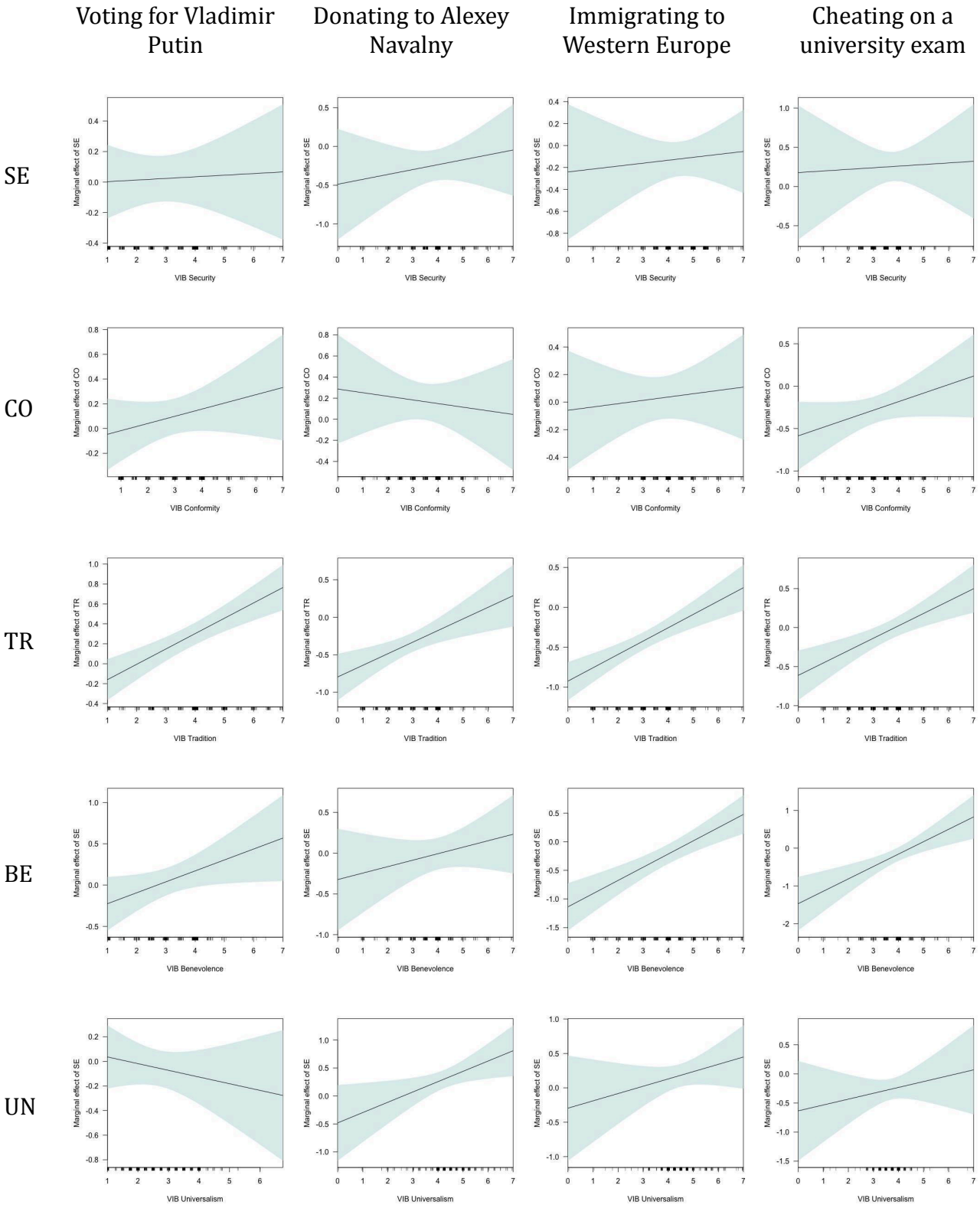
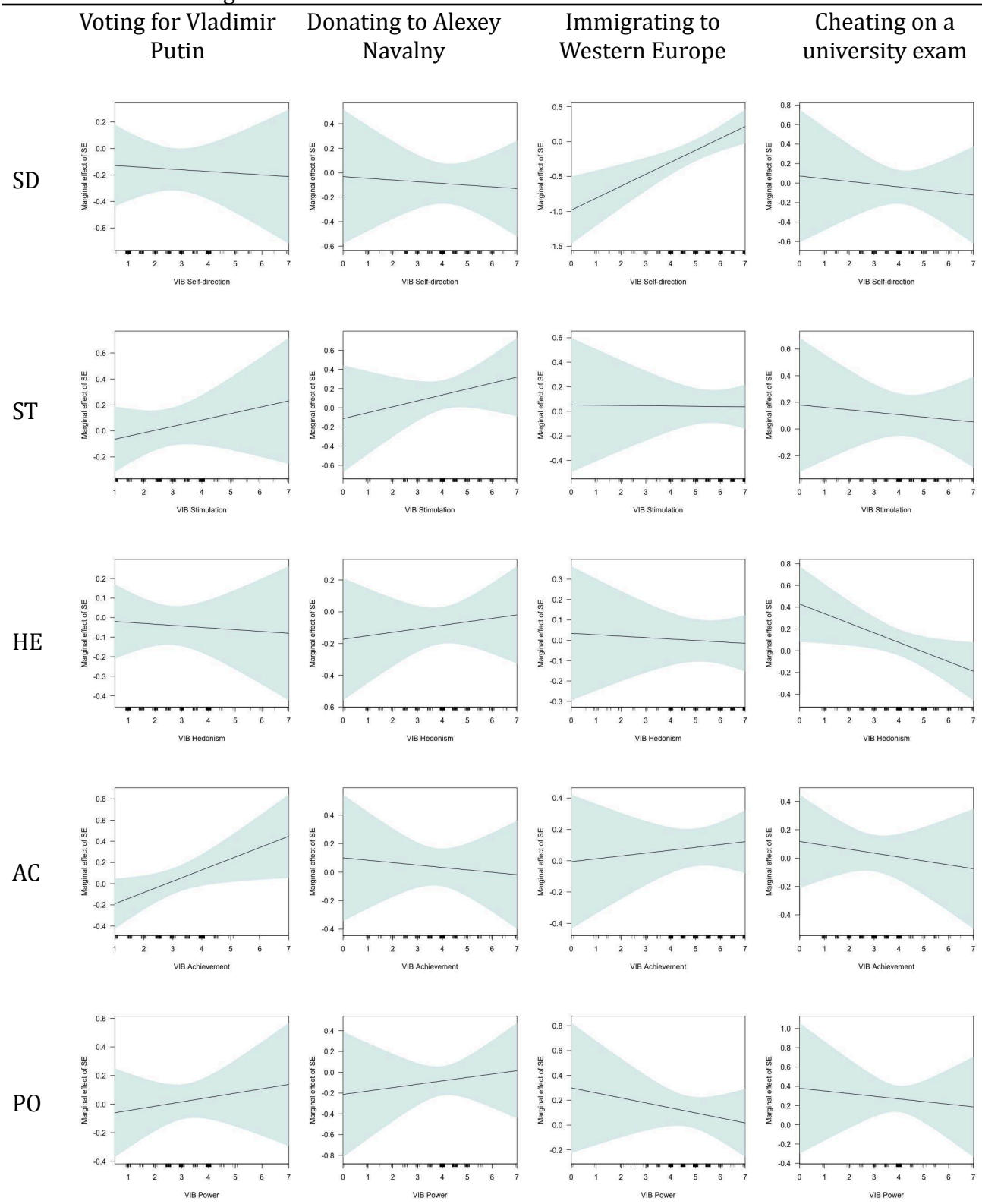


Figure 7. Marginal effect plots of the effect of ten value types over levels of relevant VIB. Self–Direction through Power.



7. Analysis by Item, 19 values

After doing an analysis with composite scores, I have wondered whether information gets lost during aggregation. Theoretically, I argued that a VIB ties a specific belief to a specific value. Nothing from what I argued so far prevents, for example, believing that a behavior promotes the interests and needs of close ones while at the same time making it more difficult for them to trust you. In fact, this as was the case with cheating on the exam, see Table A4 in the Appendix.

To see if differentiating between facets of values improves models I have performed item−by−item analyses. When designing the items, I tried to cover facets of values that were distinguished in the refined version of the theory, so I was able to connect individual VIB items to the 18 values (not 19 because I did not have an item for the value of Face).

The results are presented in Tables 7 and 8, and marginal effects plots are presented in Figures 8 – 12.

Table 7. Summary of 46 independent regressions of attitudes towards target behavior onto one refined value (centered), the relevant VIB item, and their interaction. Attitudes 1 and 2.

	Attitude 1 (voting for V. Putin)			Attitude 2 (donating to A. Navalny)		
	Value B (SE)	VIB B (SE)	Interaction B (SE)	Value B (SE)	VIB B (SE)	Interaction B (SE)
1 (SEp)	.10 (.15)	.61** (.19)	−.05 (.04)	.07 (.33)	.24 (.36)	−.01 (.08)
2 (SEs)	−.11 (.09)	.21 (.14)	**.06* (.03)**	−.38 (.21)	.34 (.23)	.05 (.05)
3 (COr)	−.07 (.12)	.07 (.10)	**.05⁺ (.03)**	.03 (.20)	.27 (.17)	−.02 (.05)
4 (COi)	−.16 (.12)	.02 (.15)	**.07⁺ (.04)**	.11 (.17)	.16 (.16)	.03 (.04)
5 (HU)	.26 (.17)	.15 (.14)	−.05 (.04)	.10 (.19)	.07 (.19)	−.01 (.05)
6 (TR)	−.15 (.12)	−.13 (.09)	**.11*** (.03)**	−.77*** (.15)	−.21 (.14)	**.15** (.05)**
7 (TR)	−.33** (19)	−.27** (.09)	**.15*** (.03)**	−.74*** (.14)	−.18 (.13)	**.14** (.04)**
8 (BEc)	−.26⁺ (.16)	−.16 (.21)	**.13** (.05**)	−.32 (.25)	.10 (.27)	.09 (.06)
9 (BEd)	−.18 (.20)	.11 (.24)	.06 (.05)	.00 (.27)	.57⁺ (.31)	−.01 (.06)
10 (UNc)	.06 (.09)	.79*** (.13)	**−.08* (.03)**	.11 (.20)	.49** (.19)	.03 (.04)
11 (UN)	.07 (.13)	.69*** (.17)	−.04 (.05)	−.35 (.26)	.22 (.23)	**.14* (.06)**
12 (UNn)	−.12 (.14)	.19 (.16)	.07 (.05)	−.58⁺ (.32)	.17 (.29)	**.15* (.08)**
13 (UNt)	−.21 (.18)	.07 (.20)	.04 (.05)	.55* (.27)	.79** (.24)	−.08 (.06)
14 (SDt)	−.04 (.16)	.39 (.25)	−.02 (.05)	−.28 (.24)	.49⁺ (.29)	.03 (.05)
15 (SDa)	−.21 (.14)	.38 (.25)	.02 (.05)	.03 (.27)	.74* (.33)	−.01 (.06)
16 (ST)	.02 (.18)	.18 (.20)	.00 (.05)	−.11 (.31)	.26 (.31)	.06 (.07)
17 (ST)	−.16 (.14)	−.09 (.20)	.07 (.05)	.01 (.22)	.36⁺ (.22)	.03 (.05)
18 (HE)	.00 (.13)	.59** (.20)	−.01 (.04)	−.07 (.26)	.72* (.29)	.00 (.06)
19 (HE)	.04 (.10)	.87*** (.16)	−.04 (.03)	−.07 (.16)	.71*** (.17)	.00 (.04)
20 (AC)	−.17 (.12)	.19 (.17)	**.07⁺ (.04)**	.13 (.17)	.79*** (.18)	−.02 (.04)
21 (AC)	−.43* (.18)	−.20 (.22)	**.12* (.05)**	−.31 (.25)	.07 (.27)	.09 (.06)
22 (POr)	−.25 (.21)	.05 (.21)	.07 (.05)	−.15 (.26)	.24 (.22)	.05 (.06)
23 (POd)	−.09 (.11)	.25⁺ (.13)	.04 (.04)	−.35 (.23)	.44⁺ (.25)	.05 (.06)

*⁺p < 0.10, *p < 0.05, **p < 0.01, ***p < 0.001*.

Table 8. Summary of 46 independent regressions of attitudes towards target behavior onto one refined value (centered), the relevant VIB item, and their interaction. Attitudes 3 and 4.

	Attitude 3 (immigrating to Europe)			Attitude 24 (cheating on an exam)		
	Value B (SE)	VIB B (SE)	Interaction B (SE)	Value B (SE)	VIB B (SE)	Interaction B (SE)
1 (SEp)	.51** (.19)	.85*** (.16)	**−.10** (.04)**	.35 (.25)	.78** (.28)	−.08 (.06)
2 (SEs)	−.81** (.26)	−.31 (.28)	**.15* (.06)**	−.41 (.36)	−.18 (.44)	**.16⁺ (.09)**
3 (COr)	−.33* (.16)	−.10 (.14)	**.08* (.04)**	−.56*** (.14)	−.12 (.13)	**.12** (.04)**
4 (COi)	−.05 (.15)	.08 (.14)	.03 (.04)	−.14 (.16)	.31⁺ (.16)	−.01 (.04)
5 (HU)	−.15 (.14)	−.14 (.15)	.03 (.04)	−.14 (.20)	.13 (.20)	.03 (.05)
6 (TR)	−.87*** (.11)	−.33*** (.10)	**.14*** (.03)**	−.56*** (15)	−.09 (.12)	**.14*** (.04)**
7 (TR)	−.85*** (.12)	−.28** (.10)	**.15*** (.03)**	−.63*** (.15)	−.15 (.12)	**.16*** (04)**
8 (BEc)	−.65*** (.16)	−.36* (.16)	**.14*** (.04)**	−.87** (.32)	−.47 (.35)	**.19* (.08)**
9 (BEd)	−.98*** (.21)	−.64** (.23)	**.20*** (.05)**	−.98*** (.29)	−.43 (.35)	**.22** (.07)**
10 (UNc)	−.17 (.22)	−.09 (.22)	.08 (.05)	.05 (.24)	.58* (.24)	−.07 (.06)
11 (UN)	.30 (.32)	.51⁺ (.28)	−.02 (.07)	−.12 (.26)	.55⁺ (.28)	−.03 (.07)
12 (UNn)	−.83** (.29)	−.47⁺ (.27)	**.18** (.07)**	−1.31** (.48)	−.76 (.46)	**.33** (.12)**
13 (UNt)	.17 (.22)	.34⁺ (.17)	−.01 (.04)	.11 (.36)	.54⁺ (.31)	−.07 (.09)
14 (SDt)	−.65** (.23)	−.16 (.22)	**.11* (.04)**	.10 (.25)	.75* (.32)	−.04 (.06)
15 (SDa)	−.09 (.20)	.42* (.20)	.01 (.04)	−.03 (.30)	.46 (.34)	.02 (.06)
16 (ST)	.04 (.26)	.38* (.18)	.00 (.04)	−.11 (.25)	.03 (.25)	.05 (.06)
17 (ST)	.16 (.28)	.57** (.19)	−.02 (.05)	.29 (.21)	.49* (.19)	−.04 (.04)
18 (HE)	.09 (.18)	.64*** (.15)	−.01 (.03)	.39 (.22)	.89*** (.23)	−.07 (.05)
19 (HE)	.00 (.16)	.56*** (.13)	.01 (.03)	.30* (.14)	.73*** (.16)	−.05 (.03)
20 (AC)	.00 (.19)	.45** (.16)	.01 (.04)	.02 (.14)	.45* (.21)	.01 (.05)
21 (AC)	.16 (.21)	.40** (.17)	.00 (.04)	.04 (.17)	.51 (.20)	.00 (.05)
22 (POr)	.35 (.21)	.42** (.14)	−.03 (.04)	.97** (.34)	.99** (.33)	**−.18* (.08)**
23 (POd)	−.22 (.19)	.20 (.19)	.05 (.05)	.14 (.23)	.50* (.23)	.00 (.06)

*⁺p < 0.10, *p < 0.05, **p < 0.01, ***p < 0.001*.

Figure 8. Marginal effect plots of the effect of nineteen value types over levels of relevant VIB. Security – Personal through Humility.

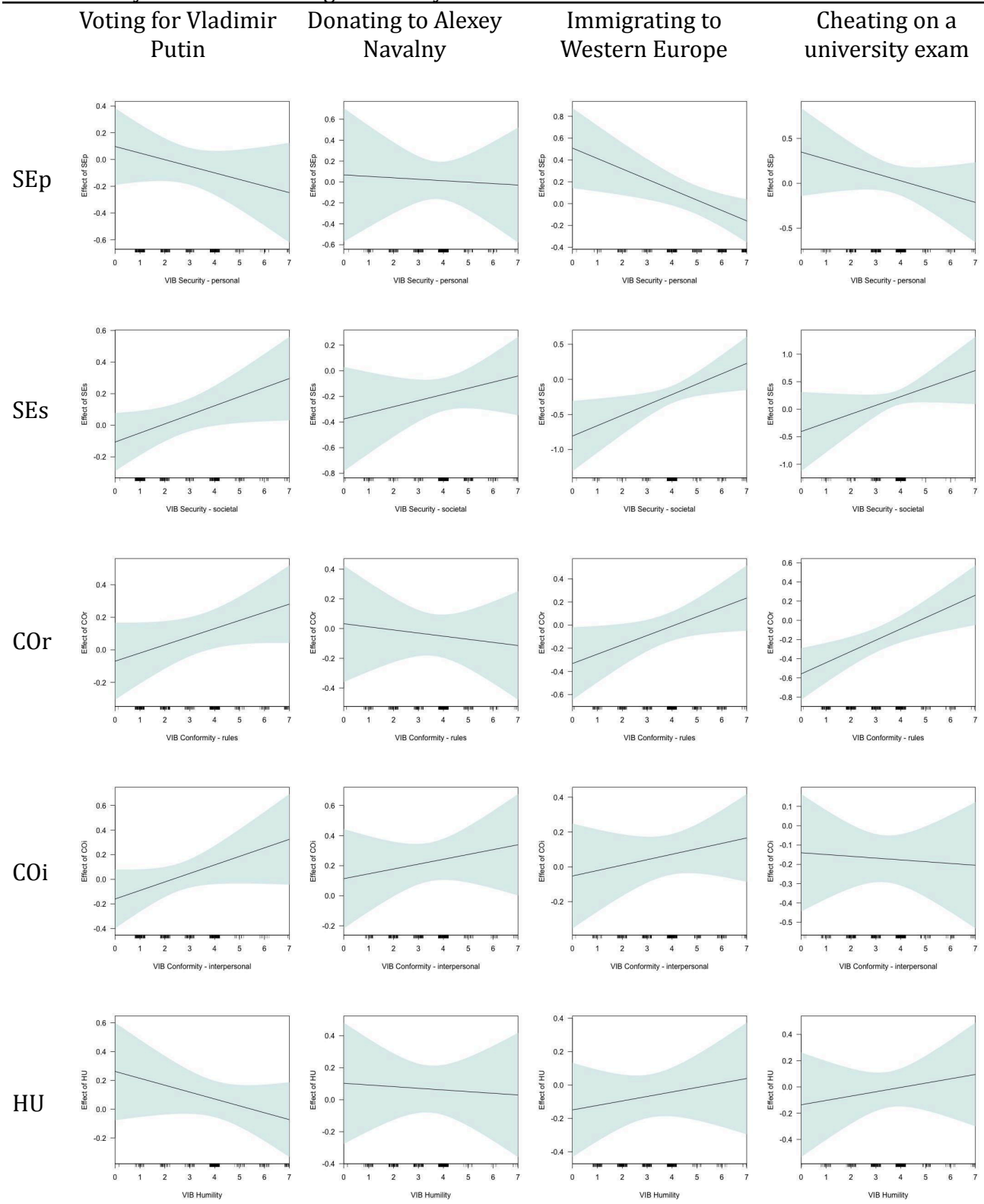


Figure 9. Marginal effect plots of the effect of nineteen value types over levels of relevant VIB. Tradition Item 1 through Universalism − Concern.

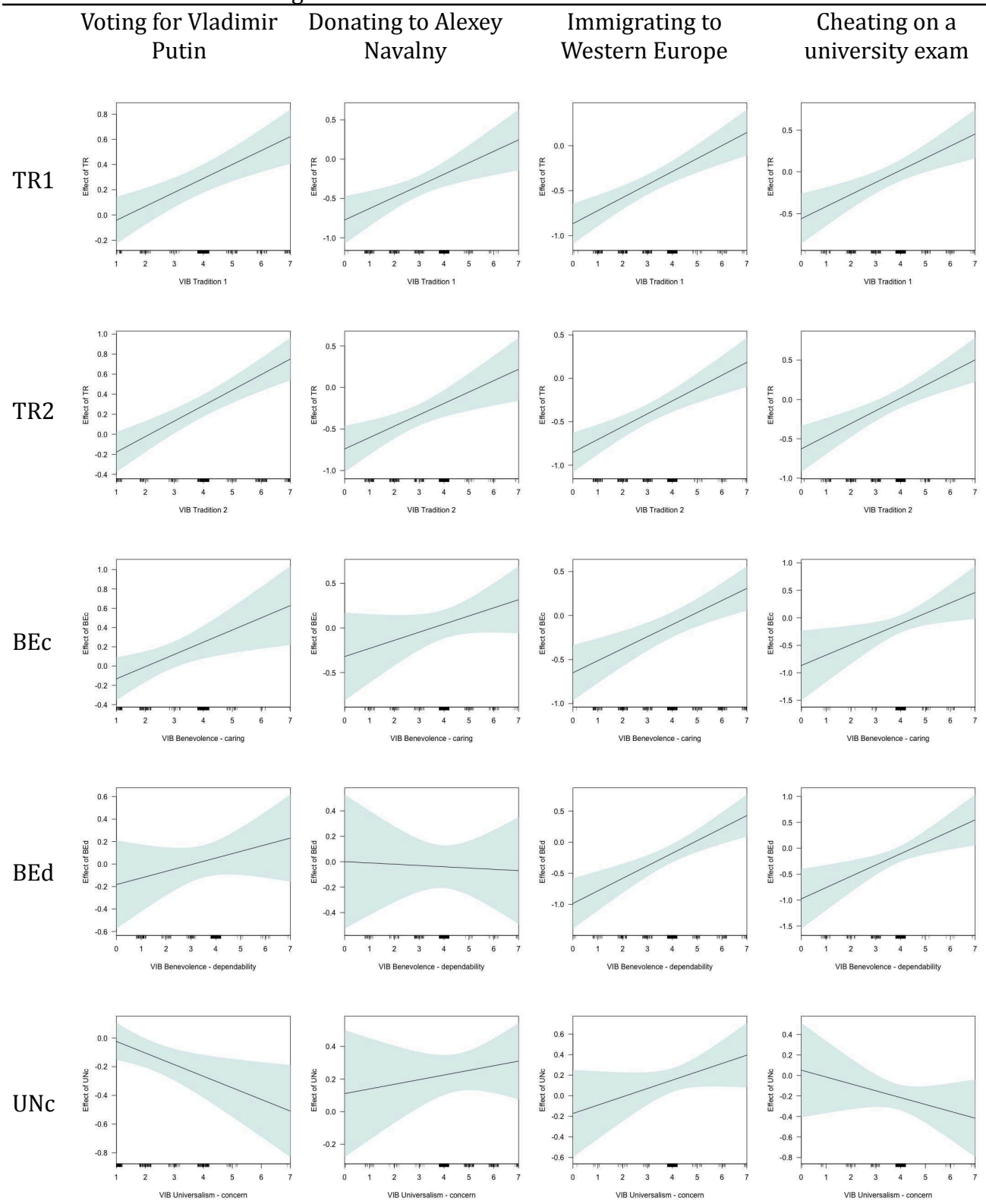


Figure 10. Marginal effect plots of the effect of nineteen value types over levels of relevant VIB. Universalism General Item through Self−Direction − Action.

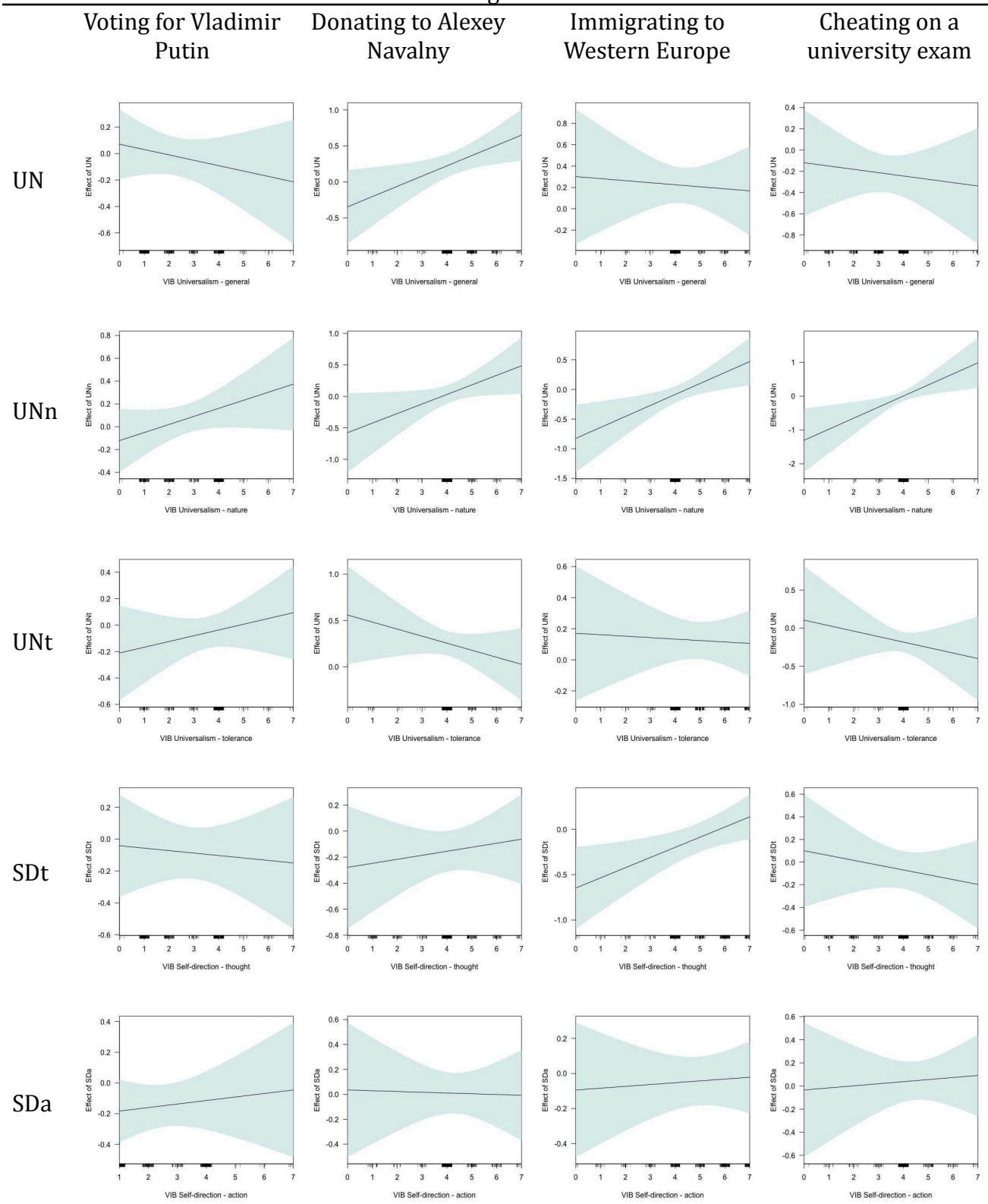


Figure 11. Marginal effect plots of the effect of nineteen value types over levels of relevant VIB. Stimulation Item 1 through Achievement Item 1.

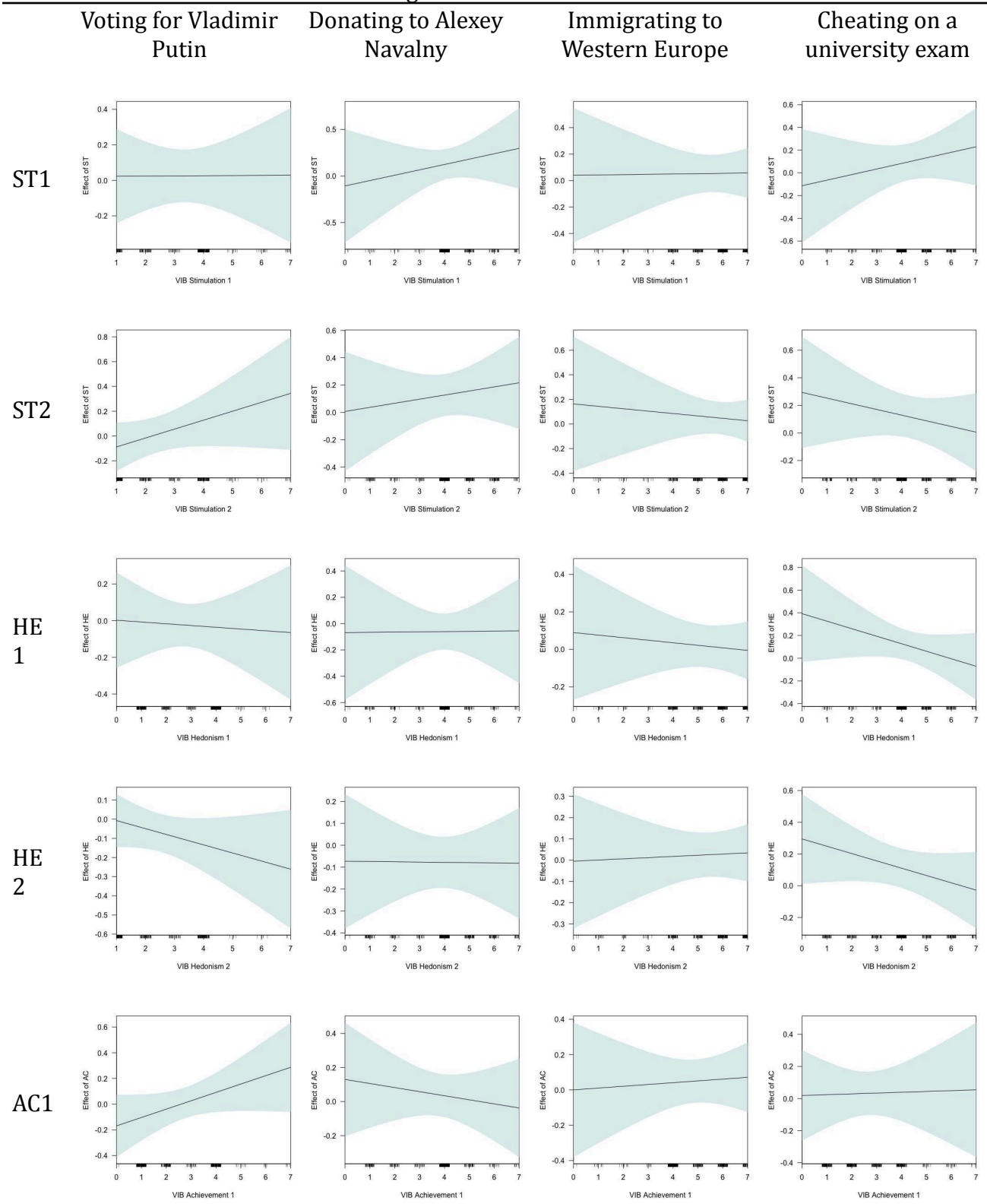
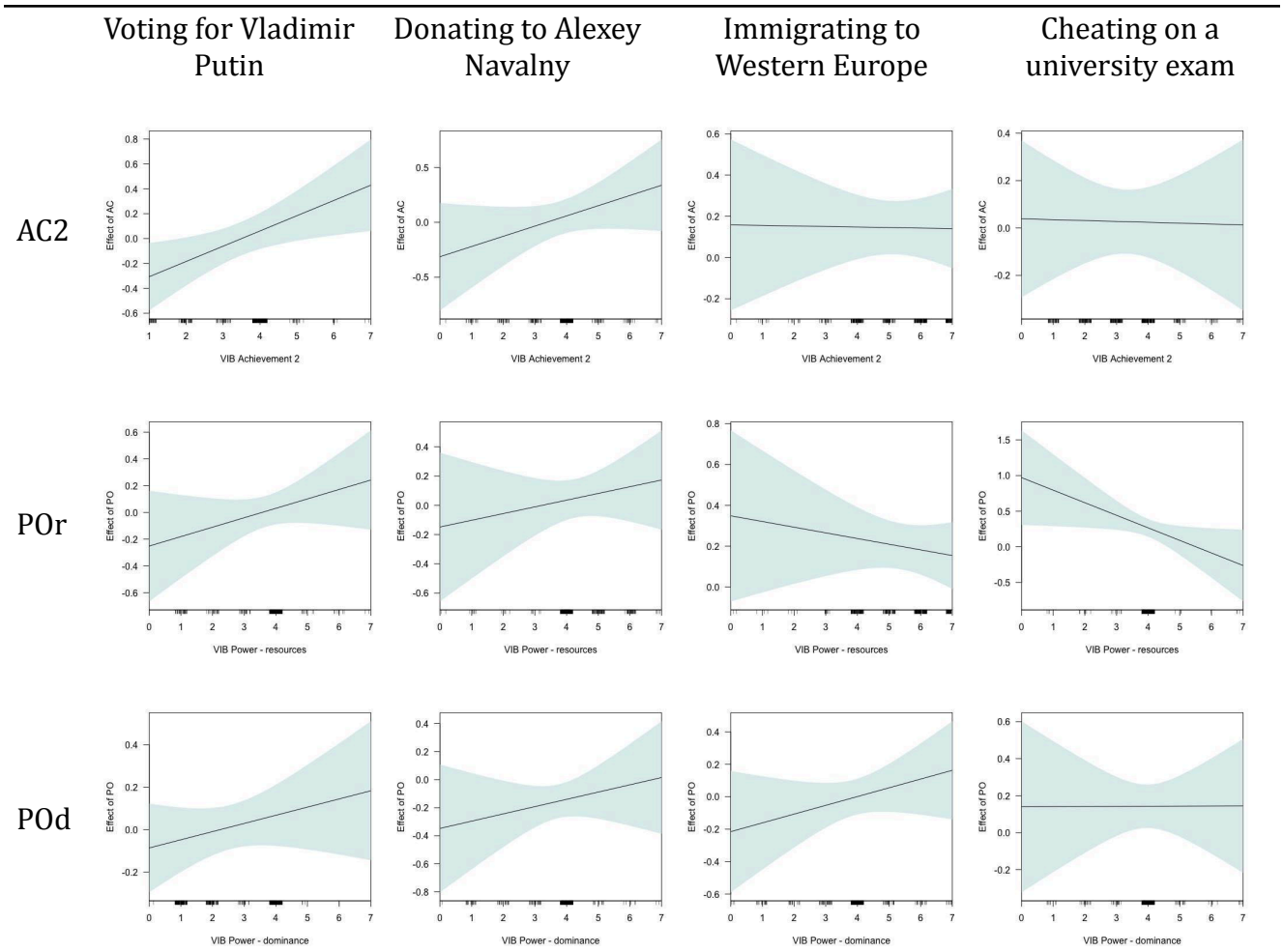


Figure 12. Marginal effect plots of the effect of nineteen value types over levels of relevant VIB. Achievement Item 1 through Power − Dominance.



8. Predicting the Interaction Effect Size

The best case scenario that I hoped for before beginning the analysis was that all value−VIB interactions would be positive and significant. This was not the case: in reality, only 23 out of possible 92 interactions were positive and significant at $p = .05$ level.

While this is much more than the 4−5 significant results we would expect by chance, to sell this as supporting the usefulness of VIBs we would have to either do better, or be able to predict in advance which interactions will be significant and which won't.

There are several reasons I though of that could possibly lead to variation in effect sizes of the interaction: insufficient statistical power, poor validity of the item, irrelevance of the VIB to the attitudinal object, lack of variance in VIBs or values, and collinearity between the VIB item and the attitude.

I regressed the size of the interaction onto those of these possible causes that I could quantify, treating each VIB−value pair as an observation, for a total n = 92 (Table X).

Table 9. Predicting the effect size of the interaction term from item characteristics.

Predictor	**B**	**(SE)**
Intercept	−.27	(.20)
Variance of variables		
VIB SD	**.16***	(.08)
Value SD	−.05	(.08)
Relevance of the item		
Percentage of neutral responses	**.03***	(.01)
Main effect of the value	−.01	(.11)
Split between positive/negative VIBs		
Collinearity	.08	(.04)
Correlation of the VIB item with the DVs	**−.13***	(.08)

Note: *$p < 0.05$.

Three predictors turned out significant, suggesting that items that perform better are less strongly related to the relevant attitude, have larger variance, and also have a slightly larger proportion of responses given to the center point.

9. Qualitative Data Analysis

To further investigate the functioning of the items, I performed a small QDA study.

Participants who agreed to answer additional questions were asked to provide additional context to some of their answers to the first set of VIB questions (voting for Vladimir Putin). For example, if they replied to the first item ("Make the country less stable and secure" vs "Make the country more stable and secure") with a response option below the midpoint, they could have been asked the following: "Before, you indicated that voting for Vladimir Putin would make the country less stable and secure. In a couple of sentences, please explain what did you mean by that". Three questions were randomly selected for each participant.

356 participants chose to answer open–ended questions. I did not apply the exclusion criteria that were used for quantitative analysis, as I could judge the quality of data on face value. I highlighted answers that indicate problems with the question.

Unfortunately, I relied on a data from a Russian state agency when choosing an attitude for the QDA. While they report that majority of the youth supports V. Putin, in my sample I had barely any pro−Putin participants, which made the analysis less insightful.

If I voted for Vladimir Putin, that would…

Item 1 (Security – personal)

Theme	Examples	Number of mentions
Endanger my safety and/or make my surroundings less secure (n = 32)		
Repressive control	*"Total control by the government", "when Putin is in power, you can go to jail"*	9
Militarism and war	*"Aggressive foreign policy can provoke war", "He's leading the country into the abyss. Towards a war with the entire world"*	8
Corruption	*"The law serves people in power", "Increasing corruption on all levels"*	7
Crime and civil unrest	*"Many people are led to crime", "Crime is on the rise, perpetrated by organized groups and law enforcement alike"*	5
Protect my safety and/or make my surroundings more secure (n = 2)		
Non–anonymity of votes	"*Those who will not vote for the right candidate will face repressive measures"*	1

Item 2 (Security – social)

Theme	Examples	Number of mentions
Make the country less stable and secure (n = 29)		
Militarism and war	*"Chemical attack in Britain, occupied Crimea, war in Syria", "Putin can start a war in several more shitholes to improve his ratings"*	8
Poverty	*"Increasing the retirement age, new taxes", "the economy is crashing", "poor social policy"*	7
Corruption	*"Thieves and corrupt officials will keep their posts", "corruption will spread"*	6
Make the country more stable and secure (n = 10)		
Order	*"His departure will shake the existing order", "current hierarchy will remain in place, so there will be no fight for power, which will be safe for the citizenry – physically and economically"*	3
Defensive capacity	"*Current policy is aimed at increasing the country's defensive potential", "strengthening the army and the police"*	2

Item 3 (Conformity – rules)

Theme	Examples	Number of mentions
Violate the rules and expectations of others (n = 27)		
Ingroup disapproval	*"Most people in my circle are not going to vote for Putin", "I have a liberal circle"*	9
Social disapproval	*"The Russians are waiting for a change", "There is a trend of lowering support for Putin"*	3
Majority support	*"Most people in Russia vote for Putin, my vote will violate their expectations", "Many people are afraid of change"* (misinterpreted the question)	3
Be in line with the rules and expectations of others (n = 11)		
Majority support	*"He has the trust of the people", "Most people vote for Putin, and they will expect the same from me"*	10
Close ones	"*Most people that I know would expect me to vote for Vladimir Putin"*	1

Item 4 (Conformity – interpersonal)

Theme	Examples	Number of mentions
Make others upset or annoyed with me (n = 38)		
Ingroup disapproval	*"My family doesn't support Putin", "My circle doesn't consider him adequate"*	14
Unrelated reasons	*"Putin is a thief", "Putin destroys Russia"*	8
Social disapproval	*"Many understand the nature of Putin's power, and they do not approve of it", "The society is brooding more and more"*	3
Help me avoid upsetting or annoying others (n = 5)		
Majority support	*"A large percentage in Russia supports Putin's rule", "The majority votes for Putin"*	2
Close ones	"*Most in my circle support Putin, and they are sad that I have an opposing opinion"*	1

Item 6 (Tradition)

Theme	Examples	Number of mentions
Conflict with the customs handed down to me by previous generations (n = 20)		
Family elders	*"My parents were upset by his work", "My grandfather and grand–grandfather have suffered from a similar system"*	5
National good	*"The previous generations wished me a good life", "Putin is not improving the well–being of the country and the Russian people"*	4
Family norms	*"The older generation of my family supports Putin", "Some of my relatives voted for him before"*	2
Be in line with the customs handed down to me by previous generations (n = 18)		
Authoritarian history	*"We can't live without an emperor, a Tsar, a tyrant", "We never had a democracy in our country"*	8
Recent history	*"Previous generations did not mind Putin", "For the previous 20 years, people voted for Putin"*	4
Family elders	"*My mom and grandmom always vote for Putin", "All my family supports Vladimir Putin"*	4

Item 7 (Tradition)

Theme	Examples	Number of mentions
Conflict with traditional values and beliefs (n = 13)		
Misclick	*"Did I say that? Aw", "I did not say that"*	4
Freedom	*"I grew up reading Cipollino, and Lemon is a villain there", "Russian citizens did not build this country for me to vote for Putin"*	2
Authoritarian history	*"Our people has made it a tradition to obey anyone in power", "In these 18 years we have formed our own traditions, out values of obedience"*	2
Nationalism	*"The oligarchic elites are interested in destroying the Russian identity", "The Russian ideal is a government that protects its citizens. And he made it a tool of violence"*	2
Express traditional values and beliefs (n = 20)		
Traditional values	*"Many believe that Putin is a protector of traditional values and beliefs", "Putin's policy is based on support for traditional values, such as family and religion"*	9
Voting for Putin as a tradition	"*It's a tradition to vote for him", "In the past, everyone voted for Putin"*	2

Item 8 (Benevolence – care)

Theme	Examples	Number of mentions
Disregard the needs of people who are dear to me (n = 19)		
Economic needs	*"My mother is a doctor, she's paid peanuts, and nothing has changed", "There should be at least some social support"*	5
Civil liberties	*"Everybody needs real rights, real choice", "They value personal freedom"*	2
Nationalism	*"The anti–Russian dictatorship of Putin is a rusophobic, Sovit, anti–christian and Jewish oligarcho–dictatorial fascist regime", "his regime does not represent the needs of the Russian people"*	2
Satisfy the needs of people who are dear to me (n = 3)		
NA	*"The only real candidate", "Traditional values"*	2

Item 9 (Benevolence – dependability)

Theme	Examples	Number of mentions
Call into question whether my family and friends can trust and rely on me (n = 16)		
Expectations	*"They expect that if I vote, I'd vote for somebody else", "People do not trust others who have a radically different opinion from them"*	7
Economic needs	*"If I vote for Putin, it would hurt the economic well–being of my loved ones", "I would vote for a person who stole their pensions"*	2
Demonstrate that my family and friends can trust and rely on me (n = 1)		
NA	*"It's a patriarchal stereotype. If you approve of the Tsar, you approve of the father"*	1

Item 10 (Universalism – concern)

Theme	Examples	Number of mentions
Make life harder for the weak and vulnerable (n = 43)		
Economic vulnerability	*"Poverty rises, and taxes with it", "Wages and pensions are too small. It's horrifying to see how the elderly live"*	17
Inequality	*"The rich will get richer and the poor will get poorer", "the chasm between the poor and the rich will widen"*	9
Civil rights	*"Putin doesn't shy away from gaining support from the majority by humiliating minorities", "continuing discrimination of the LGBTQ+, gender inequality"*	5
Make life easier for the weak and vulnerable (n = 6)		
Appeal to the poor	*"Such people like him and see him as a strong leader. They will like seeing him as president again"*	1
Social policy	"*I think our social policy goes in the right direction, just very slowly. But it's important that the direction is right"*	1

Item 11 (Universalism – general)

Theme	Examples	Number of mentions
Contribute to making the world less fair, just, or beautiful (n = 32)		
Corruption	*"Corruption and theft will increase", "Putin only wants to steal as much as he can"*	11
Civil rights	*"Discrimination and violation of rights of all possible minorities", "Disregard for human rights and freedoms"*	9
Economic vulnerability	*"Reducing support for the sick and handicapped", "will lead to further impoverishment of the largest strata of society"*	4
Contribute to making the world more fair, just, and beautiful (n = 4)		
Honesty	*"Putin has an honest policy, he argues for equal rights for all countries"*	1
Worse is better	"*The longer he is in power, the more time we have to form a decent opposition"*	1

Item 12 (Universalism – nature)

Theme	Examples	Number of mentions
Harm nature and the environment (n = 29)		
Low priority	*"They don't care about Russia's ecology", "The government doesn't pay enough attention to this"*	9
Pollution	*"Garbage dumps, toxic waste, etc", "constant releases of chemical waste"*	7
Resource economy	*"Active development of natural resources", "sold all the forests to hecking China"*	7
Help protect nature and the environment (n = 2)		
Loves nature	*"Putin loves nature and tries to defend it with all he has"*	1

Item 13 (Universalism – tolerance)

Theme	Examples	Number of mentions
Prevent me from appreciating and accepting people who are different from me (n = 7)		
Xenophobia	*"An average Putin supporter is aggressive towards liberals", "if I were to become a Putin voter, I'd be against everyone who doesn't like Putin"*	4
Help me appreciate and accept people who are different from me (n = 1)		
New people	"*I would see the voters, the poll stations. A new experience"*	1

Item 14 (Self–direction – thought)

Theme	Examples	Number of mentions
Show that I do not think independently (n = 26)		
Propaganda	*"There is a lot of propaganda in support of Putin's regime", "It would mean I surrendered to his propaganda"*	17
Conformism	*"Everybody votes for him because everybody votes for him", "Everybody will vote for Putin"*	9
Coercion	*"That would mean that they broke me", "I can only vote for Putin if they make me"*	5
Show that I think independently (n = 6)		
Alternative discourse	*"Lame social discourse divides people into pro– and anti–Putin, while life is more complex", "blindly voting against Putin is no better than blindly voting for him"*	2
Opinions of close ones	"*All people that I communicate with have a negative opinion of Putin, and that would surprise them"*	2

Item 15 (Self–direction – action)

Theme	Examples	Number of mentions
Limit my freedom and prevent me from making my own decisions (n = 32)		
Restrictive laws	*"Total censorship", "I am worried about strict control and restrictions in all spheres of life"*	15
Civil freedom	*"Putin's policy is aimed at limiting personal freedom", "my freedoms have been cut every year, little by little"*	8
Economic freedom	*"New taxes will make me an eternal slave", "The economy suffered much more than in developed countries"*	2
Expand my freedom and allow me to make my own decisions (n = 3)		
Misclick	*"I did not say that", "I don't remember this answer"*	2
Alternative discourse	*"Since middle class is overwhelmingly anti–Putin, I see no better way to show my freedom to make my own decisions than to vote for him to spite all the downers and their prevailing discourse"*	2

Item 16 (Stimulation)

Theme	Examples	Number of mentions
Make my life less exciting and surprising (n = 21)		
Stasis	*"Everything will remain the same", "Putin's policy is very predictable"*	9
Boredom	*"It's a funny, sad, but most of all – very boring cycle", "My life is boring, and if he stays, it will remain the same"*	4
Economic opportunities	*"Quality of life depends on political and economic decisions of the government", "life gets worse, and the economy degrades"*	2
Make my life more exciting and surprising (n = 6)		
Spectacle	*"Will watch his intrigues as he tries to stay in power", "would be interesting to see his last term"*	3
Novel behavior	"*That'd be my first elections", "that'd be the most unexpected thing I could do in an election"*	2

Item 17 (Stimulation)

Theme	Examples	Number of mentions
Be boring, predictable, and not exciting (n = 45)		
Stasis	*"Saltykov–Shchedrin was asked once: "What would be happening in Russia a century later?" He said: people will drink and steal. Hence the answer"*	16
Boredom	*"Isn't it boring?" "BOREDOM"*	9
Alternation of power	*"The same person is president for 24 years, that's not normal", "He's in power for too long"*	5
Be adventurous, risky, and exciting (n = 5)		
Spectacle	*"I don't know what will he do on his last term", "A survival challenge"*	3
Social risk	*"My friends will ostracize me"*	1

Item 18 (Hedonism)

Theme	Examples	Number of mentions
Prevent me from enjoying life's pleasures (n = 26)		
Opposed to intention	*"It contradicts my wishes and I will feel guilt", "I will feel complicit in a wrongful action"*	5
Quality of life	*"I expect economy to go down", "Enjoying life while eating mushrooms, pigeons, and other fodder is difficult"*	5
Let me enjoy life's pleasures (n = 4)		
Gloat	*"I will laugh at the always unhappy liberals"*	1
Humble needs	"*My hobbies and lifestyle are humble enough to not be affected by another coronation of Putin"*	1

Item 19 (Hedonism)

Theme	Examples	Number of mentions
Not be fun, be an unpleasant thing to do (n = 39)		
Opposed to intention	*"I don't want to vote for him", "This would contradict my political views"*	21
Alteration of power	*"Any system that exists for a long time accumulates mistakes", "his first two terms were useful, the third was a mistake, and the fourth would be idiotic"*	2
Lack of change	*"If he stays, there will be no positive change", "My whole life I live under Putin"*	2
Be fun, be a pleasant thing to do (n = 0)		

Item 20 (Achievement)

Theme	Examples	Number of mentions
Make me appear incompetent (n = 38)		
Lack of understanding	*"It would show a lack of critical thinking and ability to work with sources", "It would show that I don't understand politics"*	16
Intelligence	*"Voting for Putin would be idiotic", "Stupid people vote for Putin"*	2
Mistrust	*"The trust is gone", "Putin is not trustworthy"*	2
Make me appear competent (n = 4)		
No alternative	*"There are no better candidates", "Lack of adequate alternatives"*	2

Item 21 (Achievement)

Theme	Examples	Number of mentions
Make me look like a failure and elicit disapproval from others (n = 17)		
Intelligence	*"I have smart friends and they'll think I'm stupid", "If I voted for Putin, I'm either a thief or an idiot"*	6
Ingroup disapproval	*"It would be disapproved of by my circle", "Because me and my friends discuss the problems of Russia and I think that he's a bad leader"*	4
Opposed to intention	*"I can only do it if I'm forced", "If I voted for a person whose convictions are opposed to mine, I'd be disappointed in myself"*	2
Make me look successful and elicit approval and recognition from others (n = 7)		
Social approval	*"If I vote for Putin, it will meet approval from those who also voted for him", "because it will meet the expectations of this fucking grey mass that is called society in Russia"*	3
Prestige	*"In the eyes of the society, people who vote for Putin are successful, and those who don't are marginalized renegades", "if I'm okay with it as it is, it means I'm rather successful"*	2

Item 22 (Power)

Theme	Examples	Number of mentions
Make other people think I am poor (n = 5)		
Education	*"Only the uneducated and the poor think elections in Russia are real"*	1
Susceptibility	*"Because Putin's voters can only afford TV for entertainment, and it's all propaganda"*	1
Hardship	*"I can't buy myself an iphone, I drink juice once in half a year, and only see butter and Martini on New Years"*	1
Make other people think I am wealthy (n = 0)		

Item 23 (Power)

Theme	Examples	Number of mentions
Let other people tell me what to do (n = 34)		
Restrictive laws	*"A new law! Now officials, policemen, other people higher up than you can tell you what to do. If you disagree – a fine or community service", "The dear leader appoints, for example, a minister of education who makes new rules for teachers and tells me what to do"*	12
Unaccountable government	*"Increasing authoritarianism", "As the government ages in absence of competition, they stop trying to satisfy their voters"*	10
Officials	*"My actions will be governed by incompetent officials", "He will give more power to officials, cops, and ethnic gangs who will directly or indirectly affect my life, and without a working legal system I won't be able to defend myself"*	5
Let me tell other people what to do (n = 0)		

10. Suggestions for Improving the Items

This section is a mash−up of all my thoughts on how to use things I have learnt about the questionnaire to improve it. It's a work in progress.

10.1 General suggestions

- 10.1.1 Rewording the items trying to reduce the correlation between VIB and attitude
- 10.1.2 Trying to alleviate difficulties with counterfactuals (if I did something I don't plan to do, that would have this effect…)
- 10.1.3 Removing items that have been working the worst: Items 13, 18, 22, 19, 5 (see Table 10), and coming up with replacements

10.2 Topical suggestions

- 10.2.1 Misattributed items. While doing the QDA, I have noticed that answers to some VIB questions invoked themes relevant to other values. For example, Item 10, Universalism – Concern ("*would make life easier/harder for the weak and vulnerable*") barely invoked discriminated minorities. Instead, responses focused on economic inequality, making me wonder whether participants include themselves into the category "weak and vulnerable". I then checked whether the responses to this item moderate the relationship between Benevolence−caring (worrying about the in−group) and attitude, and the item performed very well.

Similarly, Item 1, Security – personal, ("*would protect my safety and/or make my surroundings more secure*") had a lot of social themes in the QDA (corruption, foreign policy, civil unrest). It worked well moderating the relationship between Security – Societal and the attitude.

- 10.2.2 For Hedonism, items, may be being more specific with "pleasure" and "fun" can help avoid conflation with pleasure from expressing an attitude vs. displeasure of acting contrary to intentions. For example: "*It would be (un)pleasant to my senses, such as smell, touch, taste, sight or hearing*".
- 10.2.3 For Security − personal, focusing on personal health and security more, for example: "*it would endanger my personal health or safety*".
- 10.2.4 For Universalism – Tolerance, making the outgroup relative instead of absolute ("*less fortunate than me*" vs. "*weak and vulnerable*").

Table 10. The 23 items of the questionnaire, rated by the average effect size of the interaction term they produced.

Rank	**Item** *number (Value)*	**Average interaction effect size *B***
1	12 (Universalism – Nature)	.18
2	7 (Tradition Item 2)	.15
3	8 (Benevolence – Concern)	.14
4	6 (Tradition Item 1)	.14
5	9 (Benevolence – Dependability)	.12
6	2 (Security – Societal)	.11
7	3 (Conformity – Rules)	.06
8	21 (Achievement Item 2)	.05
9	23 (Power – Dominance)	.04
10	4 (Conformity – Interpersonal)	.03
11	16 (Stimulation Item 1)	.03
12	14 (Self−Direction – Thought)	.02
13	20 (Achievement Item 1)	.02
14	11 (Universalism – General)	.01
15	17 (Stimulation Item 2)	.01
16	15 (Self−Direction – Action)	.01
17	5 (Humility)	.00
18	10 (Universalism – Concern)	−.01 (.13)
19	19 (Hedonism Item 2)	−.02
20	22 (Power – Resources)	−.02
21	18 (Hedonism Item 1)	−.02
22	13 (Universalism – Tolerance)	−.03
23	1 (Security – Personal)	−.06 (.06)

Note: interaction effect sizes in brackets refer to interactions of these items with a different value: Benevolence – Caring in the case of item 10, and Security – Societal in the case of item 1.

10. Auxiliary Hypotheses Testing

Following the main analysis, I have tested two additional hypotheses that were easy to test.

AH1: Average absolute score for a specific VIB (e.g. Security, Conformity) should correlate with the centered score for the respective value.

The logic here is that if a value is important for a person, they are more likely to pay attention to the outcomes of their actions for that value – or, conversely, people who pay attention to security outcomes of behaviors may use that self–knowledge when answering questions about their value priorities.

The results are presented in Table 11, generally supporting the prediction.

Table 11. Correlations between average absolute VIB scores and 10 value scores.

VIB – Value pair	**Pearson's correlation**
Security	**.12***
Conformity	−.01
Tradition	**.10***
Benevolence	.00
Universalism	**.09⁺**
Self–Direction	.01
Stimulation	**.09⁺**
Hedonism	**.18*****
Achievement	**.13***
Power	**.14****

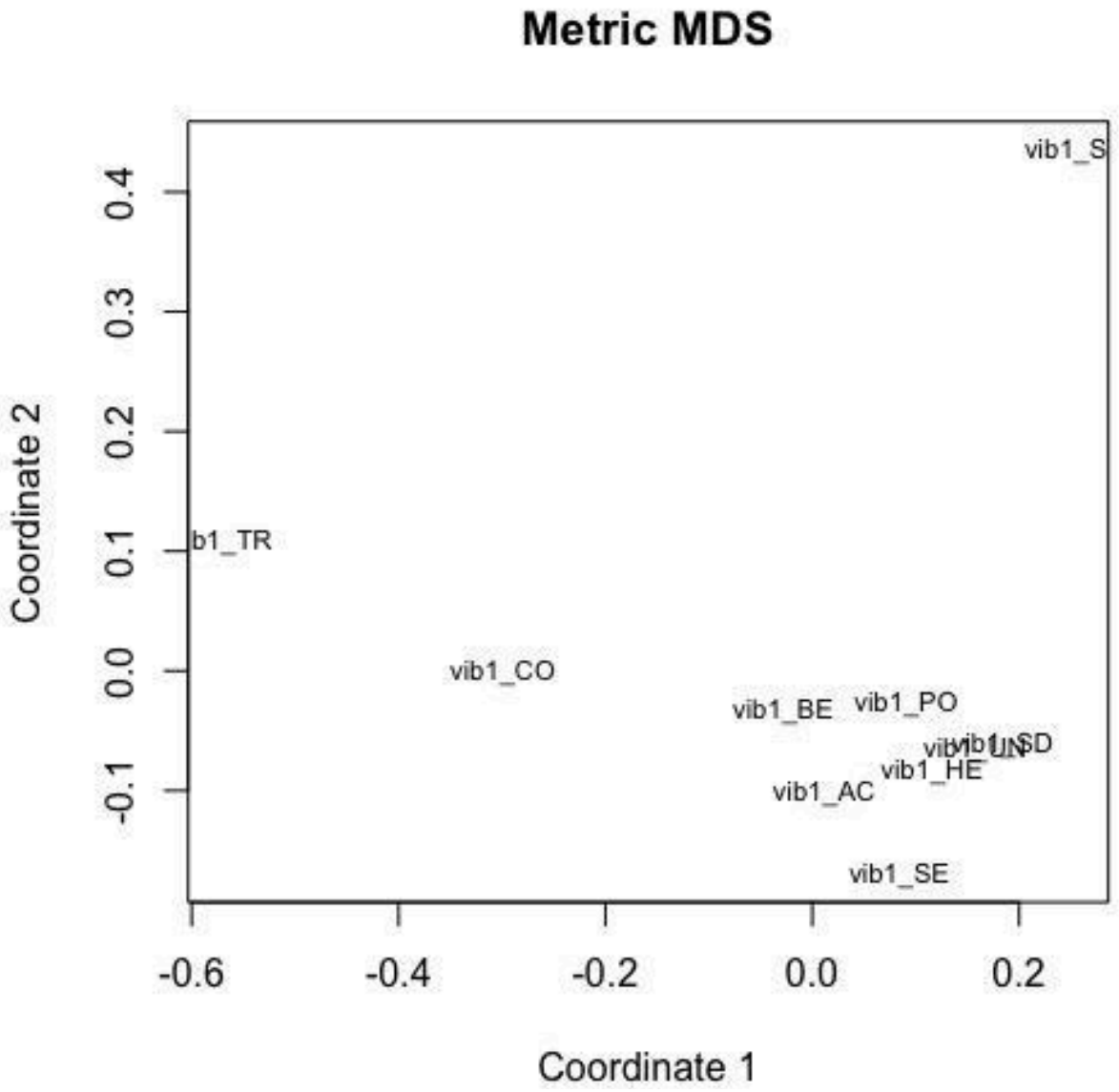
*⁺p < 0.10, *p < 0.05, **p < 0.01, ***p < 0.001*.

AH2: The pattern of correlations between VIBs towards a specific object should reproduce the circular structure of the values space.

Here I wanted to see if the motivational conflicts that underlie the value space also organize VIBs. It would make sense if they do – but it would also make sense if there are other organizing forces (for example, several VIBs going together as a part of a specific discourse). I did not delve deep into relationships between VIBs in this preliminary study, but the MDS were easy to do. They are presented in Figures 13 −16.

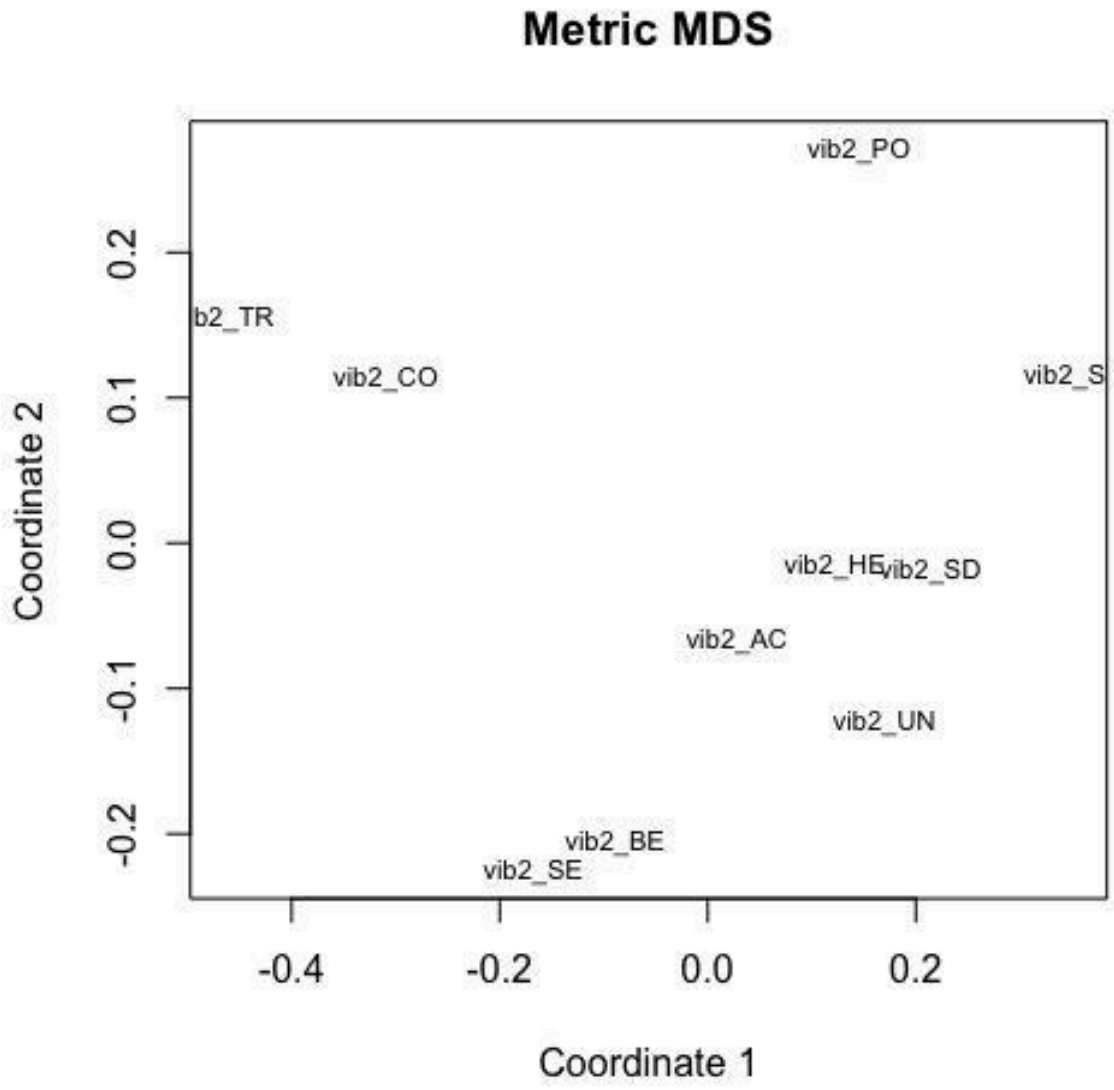
The results were not conclusive – while the opposition between conservation values and Stimulation seems to have emerged in all four MDS configurations, none produced a circular structure identical to the one produced by values.

Figure 13. Multidimensional scaling of relationships between VIBs to target behavior 1, voting for Vladimir Putin.



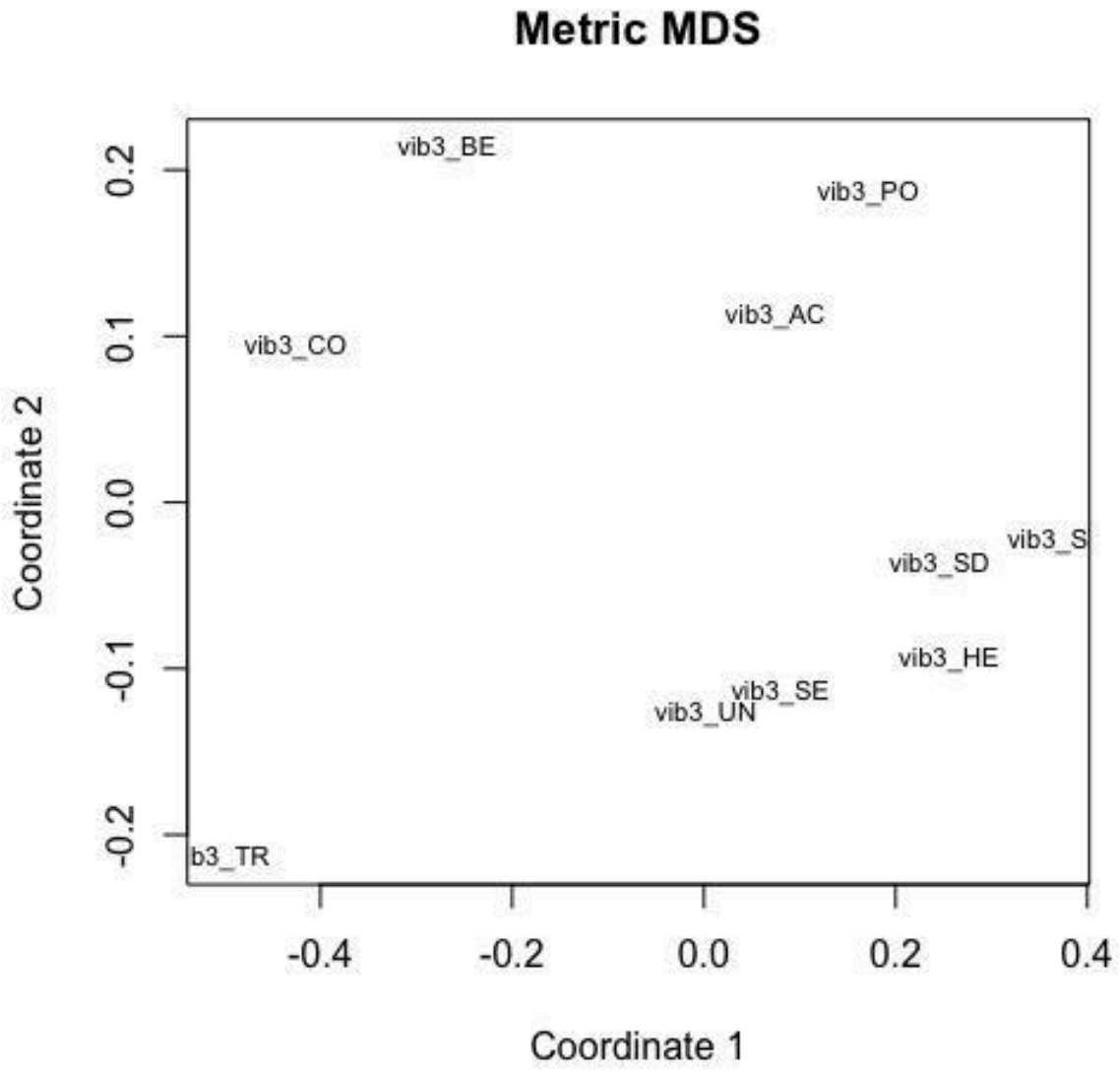
Note: vib1_S stuck in the upper−right corner is Stimulation.

Figure 14. Multidimensional scaling of relationships between VIBs to target behavior 2, voting for Alexey Navalny.



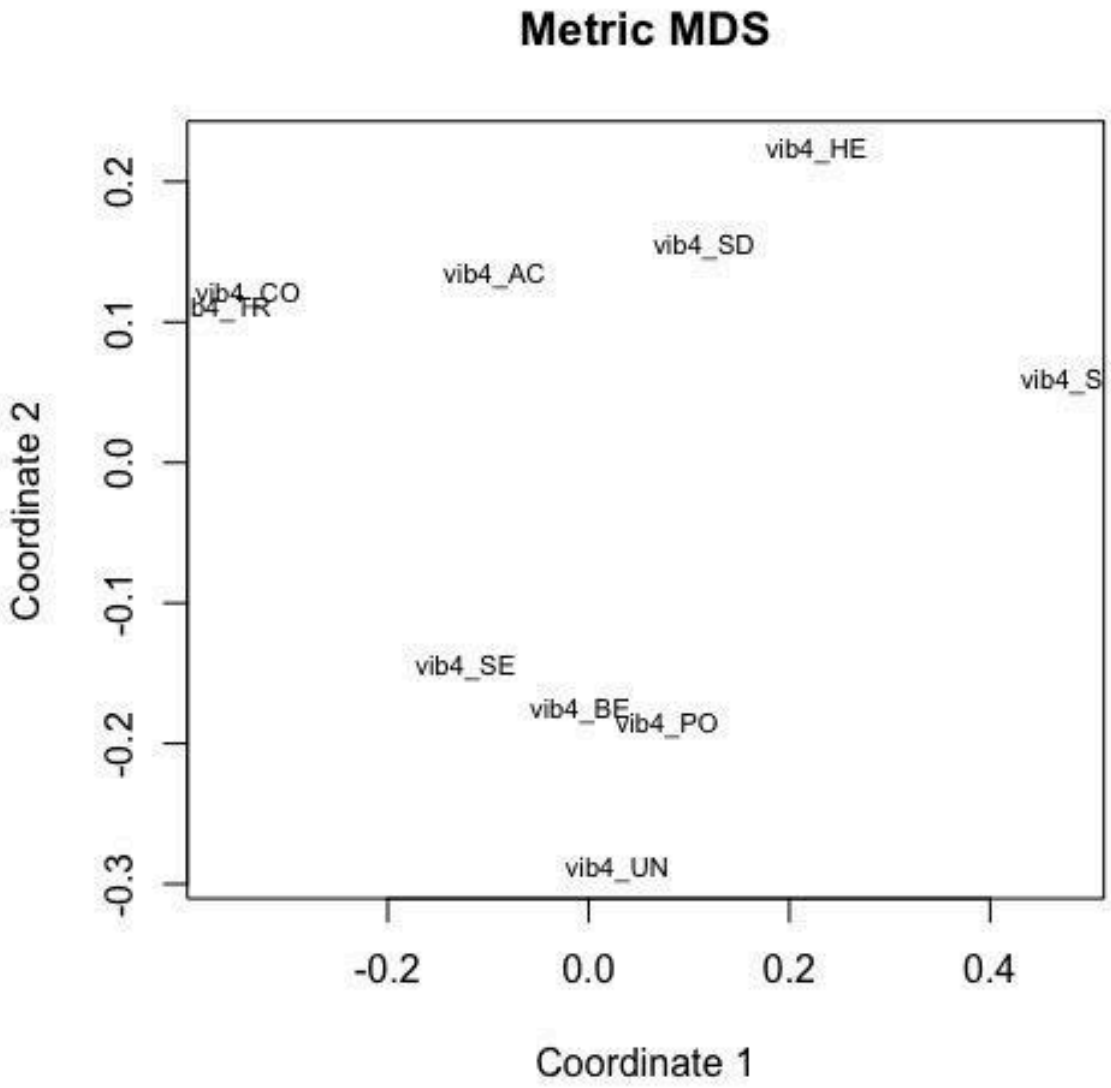
Note: vib2_S stuck to the right edge is Stimulation.

Figure 15. Multidimensional scaling of relationships between VIBs to target behavior 3, immigrating to Western Europe.



Note: vib3_S stuck to the right edge is Stimulation.

Figure 16. Multidimensional scaling of relationships between VIBs to target behavior 4, cheating on a university exam.



Note: vib4_S stuck to the right edge is Stimulation.

11. Appendix

Table A1. Counts of VIB responses for target behavior 1 (Voting for Vladimir Putin)

VIB Item	Negative, *n, %*	Neutral, *n, %*	Positive, *n, %*	Negative (% out of non−neutral)	Positive (% out of non−neutral)
1 (SEp)	194, 53.9	130, 36.1	36, 10.0	84.3	15.6
2 (SEs)	213, 59.1	104, 28.9	43, 11.9	83.2	16.8
3 (COr)	163, 45.2	129, 35.8	68, 18.9	70.6	29.4
4 (COi)	203, 56.4	135, 37.5	22, 6.1	90.2	9.8
5 (HU)	75, 20.8	211, 58.6	74, 20.6	50.3	49.7
6 (TR)	93, 25.8	178, 49.4	89, 24.7	51.1	48.9
7 (TR)	85, 23.6	159, 44.2	116, 32.2	42.3	57.7
8 (BEc)	154, 42.8	180, 50	26, 7.2	85.6	14.4
9 (BEd)	100, 27.8	244, 67.8	16, 4.4	86.2	13.8
10 (UNc)	255, 70.8	88, 24.4	17, 4.7	93.8	6.3
11 (UN)	247, 68.6	99, 27.5	14, 3.9	94.6	5.4
12 (UNn)	186, 51.7	163, 45.3	11, 3.1	94.4	5.6
13 (UNt)	77, 21.4	264, 73.3	19, 5.3	80.2	19.8
14 (SDt)	188, 52.2	138, 38.3	34, 9.4	84.7	15.3
15 (SDa)	228, 63.3	118, 32.8	14, 3.9	94.2	5.8
16 (ST)	147, 40.8	181, 50.3	32, 8.9	82.1	17.9
17 (ST)	239, 66.4	95, 26.4	26, 7.2	90.2	9.8
18 (HE)	198, 55.0	147, 40.8	15, 4.2	93.0	7.0
19 (HE)	246, 68.3	101, 28.1	13, 3.6	95.0	5.0
20 (AC)	193, 53.6	143, 41.4	18, 5.0	91.5	8.5
21 (AC)	113, 31.4	224, 62.2	23, 6.4	83.1	16.9
22 (POr)	67, 18.6	275, 76.4	18, 5.0	78.8	21.2
23 (POd)	184, 51.1	168, 46.7	8, 2.2	95.8	4.2

Table A2. Counts of VIB responses for target behavior 2 (Donating to Alexey Navalny)

VIB Item	Negative, *n, %*	Neutral, *n, %*	Positive, *n, %*	Negative (% out of non−neutral)	Positive (% out of non−neutral)
1 (SEp)	114, 31.7	203, 56.4	43, 11.9	72.6	27.4
2 (SEs)	66, 18.3	210, 58.3	84, 23.3	44.0	56.0
3 (COr)	109, 30.3	199, 55.3	52, 14.4	67.7	32.3
4 (COi)	140, 38.9	181, 50.3	39, 10.8	78.2	21.8
5 (HU)	141, 39.2	197, 54.7	22, 6.1	86.5	13.5
6 (TR)	131, 36.4	201, 55.8	28, 7.8	82.4	17.6
7 (TR)	146, 40.6	191, 53.1	23, 6.4	86.4	13.6
8 (BEc)	68, 18.9	239, 66.4	53, 14.7	56.2	43.8
9 (BEd)	75, 20.8	262, 72.8	23, 6.4	76.5	23.5
10 (UNc)	32, 8.9	217, 60.3	111, 30.8	22.4	77.6
11 (UN)	29, 8.1	208, 57.8	123, 34.2	19.1	80.9
12 (UNn)	15, 4.2	295, 81.9	50, 13.9	23.1	76.9
13 (UNt)	17, 4.7	290, 80.1	53, 14.7	24.3	75.7
14 (SDt)	83, 23.1	180, 50.0	97, 26.9	46.1	53.9
15 (SDa)	38, 10.6	245, 68.1	77, 21.4	33.0	67.0
16 (ST)	26, 7.2	243, 67.5	91, 25.3	22.2	77.8
17 (ST)	65, 18.1	170, 47.2	125, 34.7	34.2	65.8
18 (HE)	57, 15.8	244, 67.8	59, 16.4	49.1	50.9
19 (HE)	82, 22.8	163, 45.3	115, 31.9	41.6	58.4
20 (AC)	94, 26.1	200, 55.6	66, 18.3	58.8	41.2
21 (AC)	74, 20.6	243, 67.5	43, 11.9	63.2	36.8
22 (POr)	21, 5.8	235, 65.3	104, 28.9	16.8	83.2
23 (POd)	63, 17.5	278, 77.2	19, 5.3	76.8	23.2

Table A3. Counts of VIB responses for target behavior 3 (Immigrating to Western Europe)

VIB Item	Negative, *n, %*	Neutral, *n, %*	Positive, *n, %*	Negative (% out of non−neutral)	Positive (% out of non−neutral)
1 (SEp)	68, 18.9	83, 23.1	209, 58.1	24.5	75.5
2 (SEs)	40, 11.1	277, 76.9	43, 12.0	48.2	51.8
3 (COr)	117, 32.5	160, 44.4	83, 23.1	58.5	41.5
4 (COi)	127, 35.3	163, 45.3	70, 19.4	64.5	35.5
5 (HU)	205, 56.9	116, 32.2	39, 10.8	84.0	16.0
6 (TR)	152, 42.2	171, 47.5	37, 10.3	80.4	19.6
7 (TR)	165, 45.8	166, 46.1	29, 8.1	85.1	14.9
8 (BEc)	129, 35.8	128, 35.6	103, 28.6	55.6	44.4
9 (BEd)	92, 25.6	197, 54.7	71, 19.7	56.4	43.6
10 (UNc)	27, 7.5	294, 81.7	39, 10.8	40.9	59.1
11 (UN)	17, 4.7	278, 55.2	65, 18.1	20.7	79.3
12 (UNn)	14, 3.9	295, 81.9	51, 14.2	21.5	78.5
13 (UNt)	24, 6.7	154, 42.8	182, 50.6	11.7	88.3
14 (SDt)	34, 9.4	126, 35.0	200, 55.6	14.5	85.5
15 (SDa)	52, 14.4	76, 21.1	232, 64.4	18.3	81.7
16 (ST)	25, 6.9	48, 13.3	287, 79.7	8.0	92.0
17 (ST)	24, 6.7	43, 11.9	293, 81.4	7.6	92.4
18 (HE)	28, 7.8	62, 17.2	270, 75.0	9.4	90.6
19 (HE)	35, 9.7	55, 15.3	270, 75.0	11.5	88.5
20 (AC)	26, 7.2	140, 38.9	194, 53.9	11.8	88.2
21 (AC)	34, 9.4	84, 23.3	242, 67.2	12.3	87.7
22 (POr)	19, 5.3	80, 22.2	261, 72.5	6.8	93.2
23 (POd)	67, 18.6	247, 68.6	46, 12.8	59.3	40.7

Table A4. Counts of VIB responses for target behavior 4 (Cheating on a university exam)

VIB Item	Negative, *n, %*	Neutral, *n, %*	Positive, *n, %*	Negative (% out of non−neutral)	Positive (% out of non−neutral)
1 (SEp)	135, 37.5	186, 51.7	39, 10.8	77.6	22.4
2 (SEs)	69, 19.2	283, 78.6	8, 2.2	89.6	10.4
3 (COr)	210, 58.3	102, 28.3	48, 13.3	81.4	18.6
4 (COi)	175, 48.6	140, 38.9	45, 12.5	79.5	20.5
5 (HU)	130, 36.1	188, 52.2	42, 11.7	75.6	24.4
6 (TR)	117, 32.5	193, 53.6	50, 13.9	70.1	29.9
7 (TR)	133, 36.9	181, 50.3	46, 12.8	74.3	25.7
8 (BEc)	19, 5.3	304, 84.4	37, 10.3	33.9	66.1
9 (BEd)	82, 22.8	264, 73.3	14, 3.9	85.4	14.6
10 (UNc)	44, 12.2	301, 83.6	15, 4.2	74.6	25.4
11 (UN)	146, 40.6	190, 52.8	24, 6.7	85.9	14.1
12 (UNn)	18, 5.0	335, 93.1	7, 1.9	72.0	28.0
13 (UNt)	19, 5.3	325, 90.3	16, 4.4	54.3	45.7
14 (SDt)	103, 28.6	190, 52.8	67, 18.6	60.6	39.4
15 (SDa)	45, 12.5	250, 69.4	65, 18.1	40.9	59.1
16 (ST)	44, 12.2	184, 51.1	132, 36.7	25.0	75.0
17 (ST)	80, 22.2	138, 38.3	142, 39.4	36.0	64.0
18 (HE)	52, 14.4	184, 51.1	124, 34.4	29.5	70.5
19 (HE)	124, 34.4	127, 35.3	109, 30.3	53.2	46.8
20 (AC)	252, 70.0	75, 20.8	33, 9.2	88.4	11.6
21 (AC)	177, 49.2	136, 37.8	47, 13.1	79.0	21.0
22 (POr)	19, 5.3	331, 91.9	10, 2.8	65.5	34.5
23 (POd)	38, 10.6	297, 82.5	25, 6.9	60.3	39.7

Table A5. Internal consistency of the subscales of the VIB questionnaire

Value (number of items)	α (VIB1)	α (VIB2)	α (VIB3)	α (VIB4)	Standardized Cronbach's alpha (average)
Security (2)	.77	.66	.38	.52	.59
Conformity (2)	.57	.65	.67	.67	.64
Tradition (2)	.62	.76	.72	.72	.71
Benevolence (2)	.68	.71	.76	.53	.67
Universalism (4)	.79	.85	.73	.80	.79
Self−direction (2)	.68	.73	.67	.57	.66
Stimulation (2)	.50	.68	.86	.71	.69
Hedonism (2)	.78	.77	.87	.77	.80
Achievement (2)	.59	.61	.70	.69	.65
Power (2)	.40	.50	.54	.44	.47

Table A6. Average correlations between VIB questionnaire items and dependent variables

VIB item	Attitude	Behavioral intention
Item 1 (Security − personal)	.38	.34
Item 2 (Security − societal)	.42	.34
Item 3 (Conformity − rules)	.22	.21
Item 4 (Conformity − interpersonal)	.24	.21
Item 5 (Humility)	.04	.08
Item 6 (Tradition 1)	.19	.17
Item 7 (Tradition 2)	.19	.16
Item 8 (Benevolence − caring)	.33	.31
Item 9 (Benevolence − dependability)	.34	.30
Item 10 (Universalism − concern)	.34	.28
Item 11 (Universalism general)	.47	.39
Item 12 (Universalism − nature)	.29	.26
Item 13 (Universalism − tolerance)	.24	.22
Item 14 (Self-direction − thought)	.48	.40
Item 15 (Self-direction − action)	.51	.42
Item 16 (Stimulation 1)	.30	.25
Item 17 (Stimulation 2)	.40	.33
Item 18 (Hedonism 1)	.59	.49
Item 19 (Hedonism 2)	.69	.60
Item 20 (Achievement 1)	.55	.45
Item 21 (Achievement 2)	.38	.29
Item 22 (Power − resources)	.25	.17
Item 23 (Power − dominance)	.36	.30

Table A7. Summary of 46 independent regressions of behavioral intention towards target behavior onto one refined value (centered), the relevant VIB item, and their interaction. Behavioral intentions 1 and 2.

	BI 1 (voting for Vladimir Putin)			BI 2 (donating to A. Navalny)		
	Value B (SE)	VIB B (SE)	Interaction B (SE)	Value B (SE)	VIB B (SE)	Interaction B (SE)
1 (SEp)	.14 (.09)	.47*** (.11)	−.06* (.03)	.12 (.21)	.31 (.24)	−.04 (.05)
2 (SEs)	−.10 (.06)	.01 (.08)	.05** (.02)	−.09 (.15)	.24 (.16)	.01 (.03)
3 (COr)	−.01 (.06)	.03 (.06)	.02 (.02)	−.13 (.13)	.09 (.11)	.02 (.03)
4 (COi)	−.13⁺ (.07)	−.03 (.09)	.04⁺ (.02)	.04 (.11)	.16 (.11)	.00 (.03)
5 (HU)	.13 (.10)	.08 (.08)	−.03 (.02)	.08 (.13)	.12 (.12)	−.02 (.03)
6 (TR)	−.08 (.07)	−.09⁺ (.05)	.07*** (.02)	−.43*** (.10)	−.21* (.09)	.11*** (.03)
7 (TR)	−.16* (.07)	−.17** (.05)	.09*** (.02)	−.35*** (.09)	−.13 (.09)	.08** (.03)
8 (BEc)	−.32*** (.09)	−.30* (.13)	.11*** (.03)	−.02 (.17)	.20 (.18)	.02 (.04)
9 (BEd)	−.32** (.12)	−.31* (.14)	.11*** (.03)	.29⁺ (.18)	.57** (.20)	−.05 (.04)
10 (UNc)	.01 (.06)	.36*** (.09)	−.03 (.02)	.04 (.14)	.24⁺ (.13)	.02 (.03)
11 (UN)	.08 (.08)	.47*** (.11)	−.06* (.03)	−.31⁺ (.18)	.06 (.16)	.10* (.04)
12 (UNn)	−.04 (.09)	.15 (.10)	.01 (.03)	−.31 (.21)	.09 (.19)	.09⁺ (.05)
13 (UNt)	−.18⁺ (.11)	−.03 (.12)	.03 (.03)	.20 (.18)	.41* (.16)	−.03 (.04)
14 (SDt)	.07 (.10)	.24 (.15)	−.02 (.03)	−.06 (.17)	.35⁺ (.20)	.00 (.04)
15 (SDa)	.00 (.09)	.34* (.16)	−.02 (.03)	.11 (.19)	.54* (.23)	−.03 (.04)
16 (ST)	.03 (.10)	.10 (.12)	.00 (.03)	.18 (.21)	.36⁺ (.21)	−.02 (.05)
17 (ST)	−.11 (.08)	−.09 (.12)	.05⁺ (.03)	.19 (.15)	.36* (.15)	−.02 (.04)
18 (HE)	−.03 (.08)	.24⁺ (.13)	.00 (.03)	−.04 (.18)	.38⁺ (.20)	.00 (.04)
19 (HE)	−.03 (.06)	.37*** (.10)	−.01 (.02)	−.06 (.11)	.38** (.13)	.00 (.03)
20 (AC)	−.08 (.07)	.10 (.10)	.03 (.02)	.14 (.12)	.47*** (.13)	−.02 (.03)
21 (AC)	−.24* (.11)	−.16 (.13)	.07* (.03)	−.19 (.17)	−.05 (.18)	.07 (.04)
22 (POr)	−.24* (.12)	−.10 (.12)	.07* (.03)	−.15 (.17)	.03 (.15)	.04 (.04)
23 (POd)	−.08 (.06)	.02 (.08)	.04⁺ (.02)	−.15 (.16)	.24 (.17)	.02 (.04)

⁺*p < 0.10*, **p < 0.05*, ***p < 0.01*, ****p < 0.001*.

Table A8. Summary of 46 independent regressions of behavioral intention towards target behavior onto one refined value (centered), the relevant VIB item, and their interaction. Behavioral intentions 3 and 4.

	BI 3 (immigrating to Europe)			BI 4 (cheating on an exam)		
	Value B (SE)	VIB B (SE)	Interaction B (SE)	Value B (SE)	VIB B (SE)	Interaction B (SE)
1 (SEp)	.17 (.16)	.52*** (.13)	−.05⁺ (.03)	.23 (.20)	.46* (.22)	−.04 (.05)
2 (SEs)	−.35 (.21)	−.13 (.23)	.08 (.05)	−.21 (.29)	−.13 (.35)	.10 (.07)
3 (COr)	−.30* (.12)	−.02 (.11)	.06⁺ (.03)	−.28 (.11)	−.02 (.10)	.05⁺ (.03)
4 (COi)	−.27* (.12)	−.07 (.11)	.06* (.03)	−.14 (.12)	.11 (.13)	.03 (.03)
5 (HU)	−.16 (.11)	−.06 (.12)	.02 (.03)	−.08 (.15)	.11 (.15)	.04 (.04)
6 (TR)	−.53*** (.09)	−.20* (.08)	.10*** (.03)	−.26* (.12)	.04 (.10)	.06⁺ (.03)
7 (TR)	−.51*** (.09)	−.14 (.08)	.10*** (.03)	−.51*** (.12)	−.17⁺ (.09)	.13*** (.03)
8 (BEc)	−.30* (.13)	.02 (.12)	.04 (.03)	−.43⁺ (.25)	−.09 (.27)	.09 (.06)
9 (BEd)	−.36 (.17)	−.11 (.18)	.07⁺ (.04)	−.58* (.23)	−.15 (.28)	.11⁺ (.06)
10 (UNc)	−.05 (17)	.05 (.18)	.03 (.04)	.02 (.18)	.36⁺ (.18)	−.05 (.05)
11 (UN)	.16 (.26)	.40⁺ (.22)	−.03 (.06)	−.06 (.20)	.39⁺ (.22)	−.04 (.06)
12 (UNn)	−.46* (.23)	−.13 (.21)	.09⁺ (.05)	−.49 (.37)	−.05 (.36)	.10 (.09)
13 (UNt)	−.19 (.17)	.10 (.14)	.04 (.03)	−.25 (.28)	.14 (.24)	.05 (.07)
14 (SDt)	−.13 (.19)	.07 (.18)	.03 (.04)	.41* (.21)	.94*** (.26)	−.12* (.04)
15 (SDa)	−.11 (.17)	.15 (.17)	.03 (.03)	.14 (.24)	.54* (.27)	−.04 (.05)
16 (ST)	−.04 (.21)	.15 (.14)	.03 (.04)	.11 (.20)	.25 (.19)	−.03 (.04)
17 (ST)	.29 (.24)	.38* (.16)	−.03 (.04)	.28 *.16)	.49** (.15)	−.07⁺ (.03)
18 (HE)	.10 (.16)	.42** (.13)	−.01 (.03)	−.04 (.18)	.25 (.19)	.03 (.04)
19 (HE)	.06 (.15)	.36** (.12)	.00 (.03)	.09 (.12)	.37** (.13)	.00 (.03)
20 (AC)	.16 (.16)	.32* (.13)	.00 (.03)	.04 (.12)	.29⁺ (.17)	.00 (04)
21 (AC)	.29⁺ (.17)	.32* (.14)	−.02 (.03)	−.11 (.14)	.19 (.17)	.02 (.04)
22 (POr)	.09 (.18)	.16 (.11)	.00 (.03)	.67* (.27)	.65* (.26)	−.12⁺ (.07)
23 (POd)	−.08 (.15)	.16 (.15)	.03 (.04)	.16 (.18)	.44* (.18)	−.02 (.04)

⁺*p < 0.10*, **p < 0.05*, ***p < 0.01*, ****p < 0.001*.

Table A9. Summary of 16 independent regressions of attitude toward target behavior onto higher−order value, relevant VIB composite score, and their interaction.

	Value B (SE)	VIB B (SE)	Interaction B (SE)
Attitude 1			
Conservation	−.40 (.33)	−.09 (.35)	**.21* (.09)**
Self−Transcendence	−.38 (.27)	.31 (.37)	.11 (.09)
Openness to Change	.02 (.24)	.76* (.38)	−.04 (.08)
Self−Enhancement	−.19 (.20)	.48* (.24)	.07 (.06)
Attitude 2			
Conservation	−.82⁺ (.48)	−.01 (.49)	.16 (.13)
Self−Transcendence	−.29 (.45)	.39 (.41)	.16 (.10)
Openness to Change	.01 (.35)	.90* (.39)	.01 (.08)
Self−Enhancement	.25 (.30)	1.42*** (31)	−.08 (.08)
Attitude 3			
Conservation	−.72⁺ (.39)	.20 (.38)	.09 (.10)
Self−Transcendence	−1.43** (.45)	−.68⁺ (.39)	**.34*** (.10)**
Openness to Change	−1.02** (.32)	−.16 (.26)	**.18** (06)**
Self−Enhancement	.21 (.29)	.77*** (.22)	−.02 (.06)
Attitude 4			
Conservation	−.09⁺ (.47)	−.14 (.49)	**.22⁺ (.13)**
Self−Transcendence	−1.81*** (.52)	−.54 (.53)	**.37** (.14)**
Openness to Change	.35 (.42)	1.12* (.47)	−.08 (.10)
Self−Enhancement	.26 (.29)	1.01*** (.30)	−.02 (.08)

*⁺p < 0.10, *p < 0.05, **p < 0.01, ***p < 0.001*.