Do U.S. Security Assurances Dampen Public Support for Nuclear Weapons Acquisition?

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November 11, 2021

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1 Sample Recruitment and Descriptive Statistics

The study was fielded by the Datafolha Institute as part of a larger, unrelated omnibus survey conducted in December 2019. In this experiment, the respondents came from a sample of 2001 Brazilians over 18 years of age. Datafolha Institute distributed enumerators in approximately 120 municipalities, which were randomly selected by a stratum of the region, nature of the municipality (state capital, other metropolitan or interior regions), federal state, and municipality population size. These municipalities were selected to match the demographic composition laid out by the Brazilian Institute of Geography and Statistics (IBGE) in 2018 alongside age, income, education, gender, and region. Enumerators collected the data face-to-face.

Some of the variables present in the data set are described below:
1. **'Age'**: Age.
2. **'Female'**: Dummy for Female Respondent.
3. **'Income'**: 8-brackets income levels.
4. **'Region'**: Brazilian region.
5. **'High school or more'**: Dummy for High School or more of education.
6. **'Religion'**: 4-brackets religion levels[1]7. **'Conservation'**: Conservation scale is composed by tradition, conformity, and security values.[2]

Table 1: Descriptive Statistics

	All (N=2001)	N
Age	42.80 (16.20)	2001
Female:		2001
Yes	1051 (52.52%)	
No	950 (47.48%)	
Income:		1928
BRL 0.00 to BRL 998.00	484 (25.10%)	
BRL 999.00 to BRL 1,996.00	436 (22.61%)	
BRL 1,997.00 to BRL 2,994.00	404 (20.95%)	
BRL 2,995.00 to BRL 4,990.00	337 (17.48%)	
BRL 4,991.00 or more	267 (13.85%)	
High school or more:		2001
No	878 (43.88%)	
Yes	1123 (56.12%)	
Region:		2001
Center-West	162 (8.10%)	
North	154 (7.70%)	
Northeast	511 (25.54%)	
South	296 (14.79%)	
Southeast	878 (43.88%)	
Religion:		2001
Catholic	1033 (51.62%)	
Evangelical Pentecostal	376 (18.79%)	
Evangelical Traditional	255 (12.74%)	
Others/No Relig.	337 (16.84%)	
Conservation	0.93 (0.13)	2001

[1]The Evangelical Pentecostal variable aggregates the following Evangelical religions: Evangelical Pentecostal, Evangelical Neo-Pentecostal and others Evangelical. In turn, the Evangelical Traditional category is formed by Evangelical Traditional or Evangelical Protestant.

[2]The dummy is based in six questions: 1. It is important to live in a safe environment and avoid anything that could jeopardize your safety; 2. People must take orders and always follow the rules, even when no one is looking; 3. It is important to be obedient to one's parents and older people; 4. Having a stable society is important. The protection of order in society is a concern; 5. Tradition is important. It is necessary to try to follow the customs transmitted by religion or family; 6. It is important to be humble, modest and not try to draw attention to yourself. We construed six dummies, one for each question. The dummies is equal to one if the answer to the question is higher than 2, and zero otherwise. So conservation variable is equal to one less all dummies divided by 6 ($Conservation = 1 - \sum_{i=1}^{6} \frac{dummies_i}{6}$)

Table 2: Number of observations on each treatment dummy

	N
No Security Threat	288
Low Security Threat	284
High Security Threat	285
High Security Threat and U.S. Protection	287
High Security Threat and no U.S. Protection	283
High Security Threat and U.S. protection with Government Endorsement	284
High Security Threat and U.S. Protection without Government Endorsement	290

Table 3: Descriptive statistics with weights

Variable	Mean
Age	42.876
Female	0.527
Male	0.473
High School or more	0.554
Income:	
BRL 0.00 to BRL 998.00	0.257
BRL 999.00 to BRL 1,996.00	0.232
BRL 1,997.00 to BRL 2,994.00	0.210
BRL 2,995.00 to BRL 4,990.00	0.173
BRL 4,991.00 or more	0.129
Region:	
Southeast	0.444
South	0.148
Northeast	0.256
Midwest	0.078
North	0.076
Religion:	
Catholic	0.513
Evangelical Pentecostal	0.188
Evangelical Traditional	0.131
Others/No religion	0.168
Conservation	0.926

2 Pre-treatment Balance

We perform t-tests in order to check the balancing of our sample across treatment conditions. The tables below show that randomization was successful, in that the respondents in the experiment are well-balanced across all treatment arms (and in their dyads of comparison) for a range of demographic characteristics, namely: age, gender, education, region, income, and religion.

Table 4: Balance Tests

Treatment variable: High Security Threat vs No Security Threat

	Variable	Value	P-Value
	Age	0.252	0.801
	Sex	0.284	0.776
	High school or more	−0.065	0.948
Region	Center-West	0.144	0.886
	North	0.063	0.950
	Northeast	−0.169	0.866
	South	0.270	0.787
	Southeast	−0.349	0.727
Income	BRL 0.00 to BRL 998.00	-1.252	0.211
	BRL 1,997.00 to BRL 2,994.00	0.689	0.491
	BRL 2,995.00 to BRL 4,990.00	−0.682	0.496
	BRL 4,991.00 or more	1.461	0.145
Religion	Catholic	-1.469	0.142
	Evangelical Pentecostal	1.313	0.190
	Evangelical Traditional	1.094	0.274
	Others/No Relig.	−0.394	0.693
		N	
High Security Threat		285	
No Security Threat		288	

Table 5: Balance Tests

Treatment variable: Low Security Threat vs No Security Threat

	Variable	Value	P-Value
	Age	−0.555	0.579
	Sex	0.492	0.623
	High school	1.074	0.283
Region	Center-West	-0.316	0.752
	North	0.403	0.687
	Northeast	0.094	0.925
	South	0.102	0.919
	Southeast	−0.206	0.837
Income	BRL 0.00 to BRL 998.00	−1.108	0.268
	BRL 1,997.00 to BRL 2,994.00	0.557	0.577
	BRL 2,995.00 to BRL 4,990.00	0.654	0.513
	BRL 4,991.00 or more	0.713	0.476
Religion	Catholic	−2.111	0.035
	Evangelical Pentecostal	0.854	0.393
	Evangelical Traditional	1.922	0.055
	Others/No Relig.	0.278	0.781
		N	
Low Security Threat		284	
No Security Threat		288	

Table 6: Balance Tests

Treatment variable: High Security Threat vs Low Security Threat

	Variable	Value	P-Value
	Age	0.803	0.422
	Sex	−0.208	0.836
	High school	−1.136	0.257
Region	Center-West	0.459	0.647
	North	−0.338	0.735
	Northeast	−0.262	0.793
	South	0.167	0.867
	Southeast	−0.143	0.886
Income	BRL 0.00 to BRL 998.00	−0.135	0.893
	BRL 1,997.00 to BRL 2,994.00	0.127	0.899
	BRL 2,995.00 to BRL 4,990.00	−1.325	0.186
	BRL 4,991.00 or more	0.735	0.463
Religion	Catholic	0.639	0.523
	Evangelical Pentecostal	0.456	0.649
	Evangelical Traditional	−0.830	0.407
	Others/No Relig.	−0.670	0.503

	N
High Security Threat	285
Low Security Threat	284

Table 7: Balance Tests

Treatment variable: High Security Threat and U.S. Protection vs High Security Threat

	Variable	Value	P-Value
	Age	−1.568	0.117
	Sex	0.500	0.617
	High school	-0.877	0.381
Region	Center-West	-0.496	0.620
	North	0.201	0.841
	Northeast	0.334	0.738
	South	−0.332	0.740
	Southeast	0.451	0.652
Income	BRL 0.00 to BRL 998.00	1.870	0.062
	BRL 1,997.00 to BRL 2,994.00	-0.469	0.639
	BRL 2,995.00 to BRL 4,990.00	0.278	0.781
	BRL 4,991.00 or more	−1.387	0.166
Religion	Catholic	0.582	0.561
	Evangelical Pentecostal	−0.038	0.970
	Evangelical Traditional	−1.292	0.197
	Others/No Relig.	0.418	0.676

	N
High Security Threat and U.S. Protection	283
High Security Threat	285

Table 8: Balance Tests

Treatment variable: High Security Threat and U.S. Protection with Government Endorsement vs High Security Threat and U.S. Protection

	Variable	Value	P-Value
	Age	0.886	0.376
	Sex	−0.293	0.770
	High school	2.267	0.024
Region	Center-West	0.206	0.837
	North	−0.101	0.919
	Northeast	−0.072	0.942
	South	0.320	0.749
	Southeast	−0.463	0.643
Income	BRL 0.00 to BRL 998.00	−1.653	0.099
	BRL 1,997.00 to BRL 2,994.00	−0.039	0.969
	BRL 2,995.00 to BRL 4,990.00	1.299	0.194
	BRL 4,991.00 or more	1.020	0.308
Religion	Catholic	1.470	0.142
	Evangelical Pentecostal	−0.091	0.927
	Evangelical Traditional	−0.677	0.499
	Others/No Relig.	-1.197	0.232

	N
High Security Threat and U.S. Protection with Government Endorsement	284
High Security Threat and U.S. Protection	283

Table 9: Balance Tests

Treatment variable: High Security Threat and U.S Protection vs High Security Threat and U.S. Protection without Government Endorsement

	Variable	Value	P-Value
	Age	−0.981	0.327
	Sex	1.612	0.108
	High school	−2.212	0.027
Region	Center-West	−0.344	0.731
	North	0.230	0.818
	Northeast	0.118	0.906
	South	−0.239	0.811
	Southeast	0.392	0.695
Income	BRL 0.00 to BRL 998.00	2.035	0.042
	BRL 1,997.00 to BRL 2,994.00	−0.574	0.566
	BRL 2,995.00 to BRL 4,990.00	−0.690	0.490
	BRL 4,991.00 or more	−0.964	0.335
Religion	Catholic	−0.469	0.639
	Evangelical Pentecostal	1.131	0.259
	Evangelical Traditional	−0.726	0.468
	Others/No Relig.	0.103	0.918

	N
High Security Threat and U.S Protection	283
High Security Threat and U.S. Protection without Government Endorsement	290

Table 10: Balance Tests

Treatment variable: high Security Threat and U.S. Protection with Government Endorsement vs High Security Threat and U.S. Protection without Government Endorsement

	Variable	Value	P-Value
	Age	-0.085	0.932
	Sex	1.318	0.188
	High school	0.067	0.947
Region	Center-West	-0.136	0.892
	North	0.129	0.898
	Northeast	0.045	0.964
	South	0.082	0.935
	Southeast	-0.074	0.941
Income	BRL 0.00 to BRL 998.00	0.375	0.707
	BRL 1,997.00 to BRL 2,994.00	-0.615	0.539
	BRL 2,995.00 to BRL 4,990.00	0.616	0.538
	BRL 4,991.00 or more	0.059	0.953
Religion	Catholic	1.008	0.314
	Evangelical Pentecostal	1.040	0.299
	Evangelical Traditional	-1.407	0.160
	Others/No Relig.	-1.101	0.272

	N
Treatment variable: high Security Threat and U.S. Protection with Government Endorsement	284
Treatment variable: high Security Threat and U.S. Protection without Government Endorsement	290

Table 11: Balance Test: High Security Threat and no U.S. Protection vs High Security Threat and U.S. Protection

Variables	Statistic	p-value	Obs
Age	0.145	0.885	571
High School or more	0.299	0.765	571
Female	0.462	0.645	571
Southeast	0.027	0.979	571
South	0.052	0.959	571
Northeast	-0.023	0.982	571
Midwest	-0.270	0.787	571
North	0.192	0.848	571
Catholic	-0.799	0.424	571
Evangelical Pentecostal	-0.160	0.873	571
Evangelical Tradicional	1.483	0.139	571
Others/No Relig.	-0.149	0.882	571
BRL 0.00 to BRL 998.00	0.101	0.920	571
BRL 999.00 to BRL 1,996.00	0.697	0.486	571
BRL 1,997.00 to BRL 2,994.00	-1.019	0.309	571
BRL 2,995.00 to BRL 4,990.00	-0.162	0.872	571
BRL 4,991.00 or more	0.449	0.653	571

Table 12: Balance Test: High Security Threat and No U.S. Protection vs No Security Threat

Variables	Statistic	p-value	Obs
Age	-0.541	0.588	572
High School or more	1.693	0.091	572
Female	0.670	0.503	572
Southeast	-0.264	0.792	572
South	0.152	0.879	572
Northeast	0.240	0.810	572
Midwest	-0.282	0.778	572
North	0.179	0.858	572
Catholic	1.260	0.208	572
Evangelical Pentecostal	-0.290	0.772	572
Evangelical Tradicional	-0.493	0.622	572
Others/No Relig.	-0.932	0.352	572
BRL 0.00 to BRL 998.00	0.320	0.749	572
BRL 999.00 to BRL 1,996.00	-0.199	0.843	572
BRL 1,997.00 to BRL 2,994.00	-1.529	0.127	572
BRL 2,995.00 to BRL 4,990.00	1.425	0.155	572
BRL 4,991.00 or more	0.078	0.938	572

3 Treatment Effects

3.1 Main Models

In the models below, we test the main effects of our treatment conditions on public support for proliferation. The response variable is the Dummy for support for Nuclear Proliferation. The dummy assumes value one if the answer to the question "...Brazil should build a nuclear weapon to defend itself" is strongly agree or somewhat agree, and zero otherwise.

Table 13: Estimated Effect of Level of External Security Threat on Support for Proliferation

Dependent Variable:	Support for Nuclear Proliferation		
Model:	(1)	(2)	(3)
Variables			
High Security Threat	0.187***		0.162**
	(0.035)		(0.041)
Low Security Threat		0.025	
		(0.028)	
(Intercept)	0.264***	0.264***	0.290***
	(0.045)	(0.045)	(0.042)
Fit statistics			
R^2	0.03818	0.00079	0.02818
Adjusted R^2	0.03649	-0.00096	0.02647
Observations	573	572	569

Notes: In columns (1) and (2) the control group is "No security Threat"; in column (3) the control group is "Low Security Threat". Robust standard errors are clustered at the region level. Significance levels: ***: 0.01, **: 0,05, *: 0.1.

Table 14: Estimated Effect of U.S. Protection and Gov. Endorsement on Support for Proliferation

Dependent Variable:	Support for Nuclear Proliferation			
Model:	(1)	(2)	(3)	(4)
Variables				
High Security Threat and U.S. Protection	-0.131**			
	(0.034)			
High Security Threat and U.S. Protection with Gov.		0.000		-0.018
Endorsement		(0.018)		(0.023)
High Security Threat and U.S. Protection without Gov. Endorsement			0.019	
			(0.016)	
(Intercept)	0.452***	0.321***	0.321***	0.340***
	(0.015)	(0.033)	(0.033)	(0.025)
Fit statistics				
R^2	0.01800	1.98×10^{-7}	0.00040	0.00038
Adjusted R^2	0.01626	-0.00177	-0.00135	-0.00137
Observations	568	567	573	574

Notes: In column (1) the control group is "High Security Threat"; in columns (2) and (3) the control group is "High Security Threat and U.S. Protection"; in column (4) the control group is "High Security Threat and U.S Protection without Gov. Endorsement". Robust standard errors are clustered at the region level. Significance levels: ***: 0.01, **: 0,05, *: 0.1.

3.2 Main Models with controls

Table 15: Estimated Effect of Level of External Security Threat on Support for Proliferation

Dependent Variable:	Support for Nuclear Proliferation		
Model:	(1)	(2)	(3)
Variables			
High Security Threat	0.180***		0.148**
	(0.034)		(0.050)
Low Security Threat		0.035	
		(0.021)	
(Intercept)	0.543***	0.508**	0.570***
	(0.039)	(0.119)	(0.083)
Fit statistics			
Controls	Yes	Yes	Yes
R^2	0.11399	0.06700	0.08618
Adjusted R^2	0.07735	0.02797	0.04744
Observations	555	549	542

Notes: In columns (1) and (2) the control group is "No security Threat"; in column (3) the control group is "Low Security Threat". Controls include individuals age and dummies for gender, income group, religion and schooling. Robust standard errors are clustered at the region level. Significance levels: ***: 0.01, **: 0,05, *: 0.1.

Table 16: Estimated Effect of U.S. Protection and Gov. Endorsement on Support for Proliferation

Dependent Variable:	Support for Nuclear Proliferation			
Model:	(1)	(2)	(3)	(4)
Variables				
High Security Threat and U.S. Protection	-0.107*			
	(0.049)			
High Security Threat and U.S. Protection with Gov.		-0.003		-0.025
Endorsement		(0.024)		(0.025)
High Security Threat and U.S. Protection without Gov. Endorsement			0.013	
			(0.024)	
(Intercept)	0.767***	0.683***	0.773***	0.828***
	(0.052)	(0.112)	(0.103)	(0.111)
Fit statistics				
Controls	Yes	Yes	Yes	Yes
R^2	0.09385	0.08345	0.07564	0.08610
Adjusted R^2	0.05573	0.04497	0.03712	0.05003
Observations	546	547	551	554

Notes: In column (1) the control group is "High Security Threat"; in columns (2) and (3) the control group is "High Security Threat and U.S. Protection"; in column (4) the control group is "High Security Threat and U.S. Protection without Gov. Endorsement". Controls include individuals age and dummies for gender, income group, religion and schooling. Robust standard errors are clustered at the region level. Significance levels: ***: 0.01, **: 0,05, *: 0.1.

3.3 Complementary Analyses

To guarantee the robustness of the effects of high security threat treatment on support for nuclear proliferation, this section runs additional analyses changing the dyads of comparison. We do this because some might question that using "High Security Threat" in the treatment condition without an explicit cue about the absence of a U.S. security guarantee could have biased our results since respondents in this group may inadvertently assume that the U.S. provides security protection to Brazil. To test if this difference in language affected our results, we run additional analyses where the scenario of high security threat is presented to respondents alongside the explicit information about the absence of U.S. protection ("High Security Threat and no U.S. protection"). The overall

result of table 17 reveals that the high security threat effect is not conditioned by changes in the wording of the scenario. There is no statistically significant difference in the average approval in the "High Security Threat" and "High Security Threat and no U.S. protection", alleviating concerns that approval for proliferation is driven by this difference in language.

Table 17: Security Threat Results Robust to Variation in Treatment Condition

Dependent Variable:	Support for Nuclear Proliferation	
Model:	(1)	(2)
Variables		
High Security Threat and No U.S. Protection	0.103**	
	(0.030)	
High Security Threat		0.088
		(0.047)
(Intercept)	0.674***	0.784***
	(0.114)	(0.056)
Fit statistics		
Controls	Yes	Yes
R^2	0.09126	0.10269
Adjusted R^2	0.05579	0.06545
Observations	560	553

Notes: In column (1) the control group is "No Security Threat"; and in column (2) the control group is "High Security Threat and No U.S. protection". Controls include individuals age and dummies for gender,income group, religion and schooling. Robust standard errors are clustered at the region level. Significance levels: ***: 0.01, **: 0,05, *: 0.1.

3.4 Heterogeneous Treatments Effects - Conservation Values

It is well recognized that individuals often rely on cognitive shortcuts to make sense of complex phenomena in which they may struggle to understand the stakes at play or the rules of the game (Brutger and Kertzer 2018). In this context, one of the main types of cognitive shortcuts that individuals recur to interpret these situations is their own pre-existing core values. Among these values, conservation values have been shown to be an important conditioning factor on people's attitudes toward international security topics (Rathbun et al. 2016). Drawing on these insights, we could expect that people holding higher levels of conservation values - which include security, tradition, and conformity (Schwartz 1992) - would be able to process and form preferences toward nuclear proliferation differently from those at lower levels. More specifically, because the underlying motivation and cognitive schema of conservation values is consistent with deterrence, it is plausible to expect individuals at the higher end of a conservation-value scale to express more support for proliferation in scenarios of high security threat. This would occur even when the U.S. offers credible assurances given that individuals who believe the world to be a dangerous and threatening place are unlikely to trust the promises of a third country's protection against an existential threat. In our results shown in table 18 and 19, the level of conservation values does not significantly affect respondent support for pursuing the nuclear bomb, suggesting that these values are not used by the public as heuristic shorthand for assessing nuclear proliferation dynamics.

Table 18: Conservation Values Interaction with External Security Threat Treatments

Dependent Variable:	Support for Nuclear Proliferation		
Model:	(1)	(2)	(3)
Variables			
High Security Threat	0.181***		0.149**
	(0.033)		(0.044)
Low Security Threat		0.035	
		(0.021)	
Conservation	0.035	-0.106	0.277**
	(0.128)	(0.096)	(0.094)
(Intercept)	0.512***	0.605**	0.324**
	(0.090)	(0.150)	(0.113)
Fit statistics			
Controls	Yes	Yes	Yes
R^2	0.11408	0.06779	0.09255
Adjusted R^2	0.07570	0.02695	0.05226
Observations	555	549	542

Notes: In columns (1) and (2) the control group is "No security Threat"; in column (3) the control group is "Low Security Threat". Conservation was constructed using factor analysis. Controls include individuals age and dummies for gender, income group, religion and schooling. Robust standard errors are clustered at the region level. Significance levels: ***: 0.01, **: 0,05, *: 0.1.

Table 19: Conservation Values Interaction with U.S. Protection and Gov. Endorsement Treatments

Dependent Variable:	Support for Nuclear Proliferation			
Model:	(1)	(2)	(3)	(4)
Variables				
High Security Threat and U.S. Protection	-0.108*			
	(0.049)			
High Security Threat and U.S. Protection with Gov.		-0.004		-0.024
Endorsement		(0.023)		(0.024)
High Security Threat and U.S. Protection without Gov. Endorsement			0.012	
			(0.024)	
Conservation	0.051	-0.035	-0.099	0.075
	(0.070)	(0.132)	(0.117)	(0.105)
(Intercept)	0.723***	0.714**	0.863**	0.760***
	(0.057)	(0.207)	(0.197)	(0.080)
Fit statistics				
Controls	Yes	Yes	Yes	Yes
R^2	0.09406	0.08354	0.07648	0.08660
Adjusted R^2	0.05415	0.04324	0.03617	0.04876
Observations	546	547	551	554

Notes: In column (1) the control group is "High Security Threa"; in columns (2) and (3) the control group is "High Security Threat and U.S. Protection"; in column (4) the control group is "High Security Threat and U.S. Protection without Gov. Endorsement". Conservation was calculated using factor analysis. Controls include individuals age and dummies for gender, income group, religion and schooling. Robust standard errors are clustered at the region level. Significance levels: ***: 0.01, **: 0,05, *: 0.1.

4 Survey Instrument

Below we present the instrumentation for the study fielded in Brazil, with the text translated into English. In the process of translation from Portuguese to English, we focus on the accuracy of meaning rather than of a literal translation based on word-to-word, which avoids the meaning distortions that might occur when the translated words combine into sentence form. While some might question our strategy of using short vignettes by arguing that it decreases the realism and participant engagement with the study, Brutger et al. (2020) point out that the extension of the vignette does not affect the direction of the main treatments effects. More important than the extension of vignettes text itself is whether the type of information provided to respondents makes them engage in the causal process proposed by the mechanisms under analysis. We firmly believe that our study goes in this direction.

4.1 Vignettes

Introduction

"Everyone talks about Brazil's external security in relation to other countries in the world. We will create different hypothetical scenarios and ask what you think of each one."

Levels of External Security Threat

No Security Threat: Consider that Brazil does not have an enemy country strong enough to threaten its security.

Low Security Threat: Consider that a weak enemy country poses a major military threat to Brazil's security.

High Security Threat: Consider that a powerful enemy country poses a major military threat to Brazil's security.

U.S. security guarantee

U.S. protection: Consider that a powerful enemy country poses a major military threat to Brazil's security. The United States says it will protect Brazil.

No U.S. protection: Consider that a powerful enemy country poses a major military threat to Brazil's security. The United States says it will not protect Brazil.

Government Endorsement to the U.S. security guarantee

Gov. Endorsement: Consider that a powerful enemy country poses a major threat to Brazil's security. The United States says it will protect Brazil, and the Brazilian government says that it trust in this promise.

Without Gov. Endorsement: Consider that a powerful enemy country poses a major threat to Brazil's security. The United States says it will protect Brazil, yet the Brazilian government says that it does not trust in this promise.

4.2 Dependent Variable

Given this situation, do you agree that Brazil should build a nuclear weapon to defend itself?

- I totally agree
- I partly agree
- I neither agree neither disagree
- I partly disagree

- I totally disagree
- I do not know

4.3 Attitudinal Measure: Conservation Values

For questions on conservation values, we ask respondents to select the response among *totally agree, partly agree, neither agree nor disagree, partly disagree, and totally disagree* that describe how much they agree with each of the statements below:

Security

- Living in a safe environment is a priority, and one should avoid any action that might put personal safety at risk.
- Having a stable society is important. Social order is a concern.

Conformity

- People should do what they are told and always follow the rules, even when no one is watching.
- It is important to be obedient to your parents and to elders.

Tradition

- It is important to be humble and modest, and not draw attention to oneself.
- Tradition is important. You try to follow the customs handed down by your religion or your family.

4.4 Demographic variables

[**Q.1**] What is your sex?

- Male
- Female

[**Q.2**] What is your age? *(Numerical Entry)*

[**Q.3**] What is your level of education?

- Illiterate/Incomplete elementary school
- Complemete elementary school/incomplete middle school
- Complete middle school
- Incomplete high school
- Complete high school
- Incomplete undergraduate school
- Complete undergraduate school
- Graduate school

[**Q.4**] Roughly, how much did you earn last month?

- up to R$ 1.045,00
- from R$ 1.046,00 to R$ 2.090,00
- from R$ 2.091,00 to R$ 3.135,00

- from R$ 3.136,00 to R$ 5.225,00
- from R$ 5.226,00 to R$ 10.450,00
- from R$ 10.451,00 to R$ 20.900,00
- from R$ 20.901,00 to R$ 52.250,00
- Not sure
- I would rather not answer

[**Q.5**] What is your race or ethnic group?

- White
- Black
- Brown
- Asian
- Native American
- Other (open textbox)

[**Q.6**] I would appreciate it if you told me your religion:

- Evangelical Christian
- Evangelical Protestant Christian
- Evangelical Pentecostal Christian
- Evangelical Neo-Pentecostal Christian
- Other Evangelical Christian denominations
- Umbanda, Candomblé or Afro-Brazilian religions
- Kardecist Spiritism, spiritualist
- Catholic
- Jewish
- Other religion? - (Seisho-No-Iê, Perfeita Liberdade, Budhist, Santo Daime, Muslim)
- No religion/Agnostic
- Atheist/does not believe in God

5 References

Brutger, Ryan, Joshua D. Kertzer, Jonathan Renshon, Dustin Tingley, and Changai M. Weiss. 2020. "Abstraction and Detail in Experimental Design." Working Paper. **URL**: <https://bit.ly/3juYJ0A>.

Brutger, Ryan, Joshua D. Kertzer. 2018. "A Dispositional Theory of Reputational Costs." *International Organization* 72(3): 693-724.

Rathbun, Brian C., Joshua D.Kertzer, Jason Reifer, Paul Goren, and Thomas J. Scotto. 2016. "Taking Foreign Policy Personally: Personal Values and Foreign Policy Attitudes." *International Studies Quarterly* 60(1): 124-137.

Schwartz, Shalom H. 1992. "Universals in the Content and Structure of Values: Theoretical Advances and Empirical Tests in 20 Countries." *Advances in Experimental Social Psychology* 25:1-65.