GeoSociology Project Tables

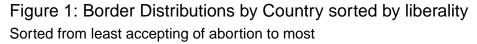
Albert J. Bergesen and Kelsey E. Gonzalez

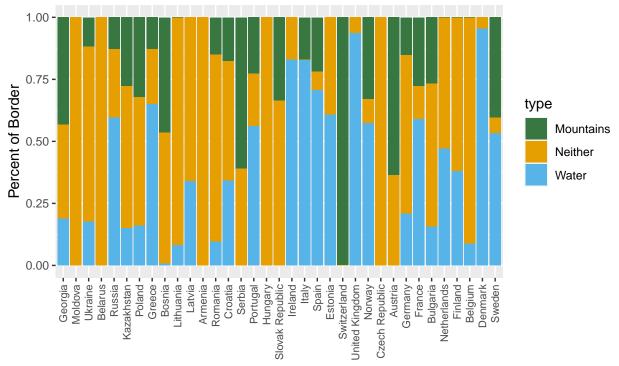
January 20, 2020

```
df <- read_csv("data_output/countries_merged.csv") %>% drop_na() #drop NAs
```

Descriptive Statistics

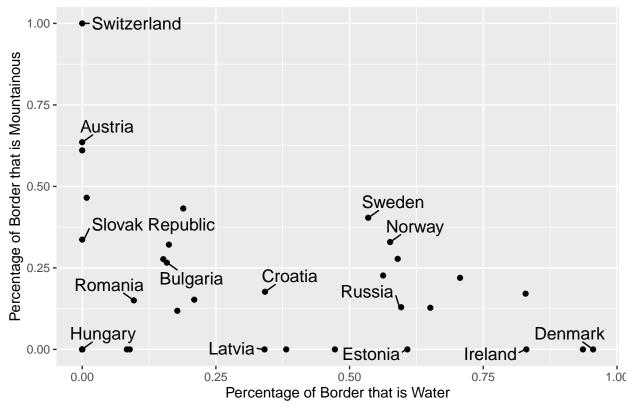
```
df %>%
  select(p_combwater, p_mount_tot, country, abortion2) %>%
  mutate(abortion2 = ifelse(abortion2 == "Pro Choice", 1, 0)) %>%
  group_by(country) %>%
  summarize(Water = first(p_combwater),
           Mountains = first(p_mount_tot),
           Neither = 1 - Water - Mountains,
           Neither = ifelse(Neither < 0, 0, Neither),</pre>
            abortion2 = mean(abortion2)) %>%
  pivot_longer(-c(country, abortion2), names_to = "type", values_to = "percent") %>%
  ggplot(aes(x = reorder(country, abortion2), y = percent, fill = type)) +
   geom_col()+
   theme(axis.text.x = element_text(size=8, angle=90, vjust=0.5, hjust=1)) +
   ggtitle("Figure 1: Border Distributions by Country sorted by liberality",
            subtitle = "Sorted from least accepting of abortion to most") +
   xlab("") + ylab("Percent of Border") +
  scale_fill_manual(values=c("#397741", "#E69F00", "#56B4E9", "#FFFFFF"))
```





```
countries <- df %>%
  group_by(country) %>%
  summarize(water = first(p_combwater),
            mountains = first(p_mount_tot))
# ten_countries <- countries %>%
  select(country) %>%
   sample_n(.,14)
# ten_countries <- rbind(ten_countries, "Switzerland", "Denmark", "Hungary")
ten_countries <- c("Austria", "Bulgaria", "Romania", "Sweden", "Norway",
                   "Russia", "Estonia", "Latvia", "Ireland", "Switzerland",
                   "Denmark", "Hungary", "Slovak Republic", "Croatia")
countries <- countries %>%
   mutate(label = ifelse(country %in% ten_countries,
                        as.character(country),
                        ""))
  ggplot(countries,
         aes(x = water, y = mountains)) +
   geom_point() +
    ggrepel::geom_text_repel(aes(label = label),
                  size = 4.5.
                  point.padding = .2,
                  box.padding = .3,
```

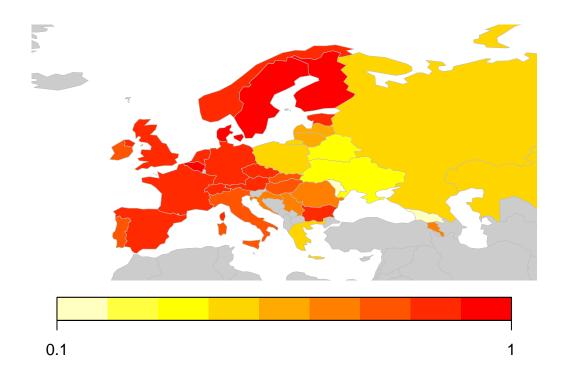
Figure 2: Border Distributions by Country



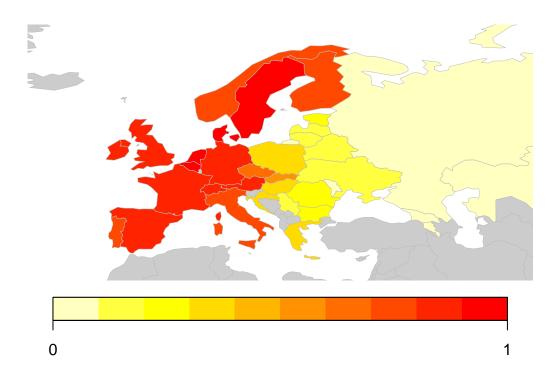
```
malDF <- df %>%
  mutate(abortion = ifelse(abortion2 == "Pro_Choice", 1, 0),
         gay_marriage = ifelse(gay_marriage2 == "Pro_Marriage_Equality", 1, 0),
         jews_neighbor = ifelse(jews_neighbor == "Accepts_Jews", 1, 0),
         muslims_neighbor = ifelse(muslims_neighbor == "Accepts_Muslims",1, 0)) %>%
  group by(country) %>%
  summarize(abortion = mean(abortion),
            gay_marriage = mean(gay_marriage),
            jews_neighbor = mean(jews_neighbor),
            muslims_neighbor = mean(muslims_neighbor)) %>%
  pivot_longer(-country, names_to = "variable", values_to = "percent")
abortion <- malDF %>%
  filter(variable == "abortion") %>%
  rename(`Percent Pro-Life` = percent)
gay_marriage <- malDF %>%
  filter(variable == "gay_marriage") %>%
  rename(`Percent Pro Marriage-Equality` = percent)
```

```
jews_neighbor <- malDF %>%
  filter(variable == "jews_neighbor") %>%
  rename(`Percent Accepts Jewish Neighbors` = percent)
muslims_neighbor <- malDF %>%
  filter(variable == "muslims_neighbor") %>%
  rename(`Percent Accepts Muslim Neighbors` = percent)
abortion <- joinCountryData2Map(abortion, joinCode = "NAME",
                               nameJoinColumn = "country")
gay_marriage <- joinCountryData2Map(gay_marriage, joinCode = "NAME",</pre>
                                 nameJoinColumn = "country")
jews_neighbor <- joinCountryData2Map(jews_neighbor, joinCode = "NAME",</pre>
                                 nameJoinColumn = "country")
muslims_neighbor <- joinCountryData2Map(muslims_neighbor, joinCode = "NAME",</pre>
                                 nameJoinColumn = "country")
## Specify the colourPalette argument
abortion <- mapCountryData(abortion,</pre>
                      nameColumnToPlot="Percent Pro-Life",
                      catMethod = "pretty",
                      missingCountryCol = gray(.8),
                      xlim = c(-20, 59),
                      ylim = c(35, 71),
                      asp = 1)
```

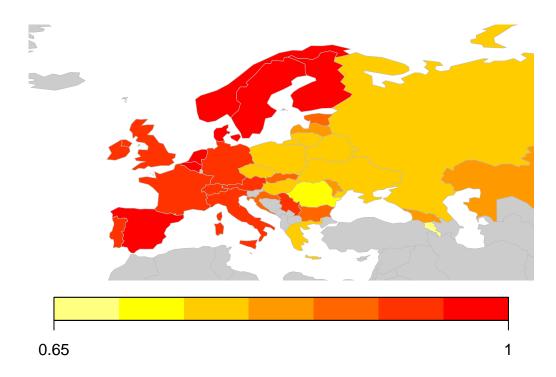
Percent Pro-Life



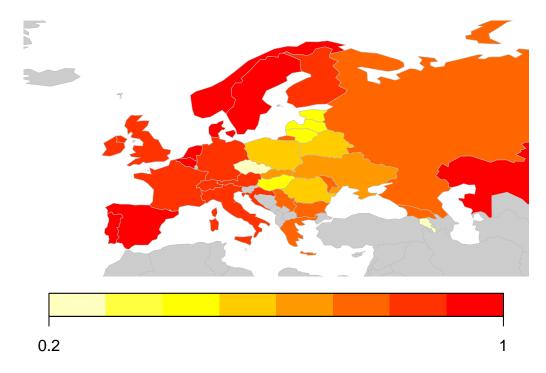
Percent Pro Marriage-Equality



Percent Accepts Jewish Neighbors



Percent Accepts Muslim Neighbors



```
props <- df %>%
  mutate(high = ifelse(country == "Switzerland", country, NA),
         high = ifelse(country == "Denmark", country, high),
         high = ifelse(country == "Hungary", country, high))
proportions_all <- as.data.frame(rbind(as.data.frame(prop.table(table(props$jews_neighbor))),</pre>
                                        as.data.frame(prop.table(table(props$muslims_neighbor))),
                                        as.data.frame(prop.table(table(props$religious))),
                                        as.data.frame(prop.table(table(props$gay_marriage2))),
                                        as.data.frame(prop.table(table(props$abortion2)))))
colnames(proportions_all) <- c("Variable","Overall")</pre>
proportions <- as.data.frame(rbind(prop.table(table(props$jews_neighbor,props$high), 2),</pre>
                                    prop.table(table(props$muslims_neighbor,props$high), 2),
                                    prop.table(table(props$religious,props$high), 2),
                                    prop.table(table(props$gay marriage2,props$high), 2),
                                    prop.table(table(props$abortion2,props$high), 2)))
total_proportions_table <- cbind(proportions_all,proportions)</pre>
total_proportions_table %>%
  select(-Variable) %>%
  kable("latex", round(digits = 3)) %>%
  kable_styling(position = "center") %>%
```

Table 1: Attitudinal Responses Over Total Group and Selected Countries

	All Countries	Example Countries		
		High Water	Low Water, Low Mountains	High Mountains
	Overall	Denmark	Hungary	Switzerland
Accepts Jews as Neighbors	0.872	0.984	0.829	0.927
Wouldn't Accept Jews as Neighbors	0.128	0.016	0.171	0.073
Accepts Muslims as Neighbors	0.731	0.927	0.421	0.868
Wouldn't Muslims Jews as Neighbors	0.269	0.073	0.579	0.132
Not Religious	0.476	0.483	0.610	0.543
Religious	0.524	0.517	0.390	0.457
Against Marriage Equality	0.538	0.089	0.700	0.177
Pro Marriage Equality	0.462	0.911	0.300	0.823
Pro Choice (Abortion)	0.669	0.948	0.739	0.820
Pro Life (Abortion)	0.331	0.052	0.261	0.180
NT .	4.4.700			

N 44,708

```
df %>%
  group_by(country) %>%
  summarize(`Internet Users` = mean(interusers),
            `Percent \n Urban Residents` = 0.01*mean(perc_urban),
            `Percent Entrolled \n in Tertiary Educ` = 0.01*mean(tert),
            `GDP Per Capita` = mean(GDP),
            N = n()) %
  kable("latex",
        round(digits = 2),
        escape = FALSE,
        col.names = c("Country",
                      "Internet Users",
                      "Urban Residents",
                      "Enrolled in Tertiary Educ",
                      "GDP Per Capita",
                      "N")) %>%
  kable_styling(position = "center")
```

Table 2: Country-Level Variables by Country

Country	Internet Users	% Urban Residents	% Enrolled in Tertiary Educ	GDP Per Capita	Count
Armenia	0.70	0.63	0.52	12433.09	1348
Austria	0.88	0.58	0.86	455736.58	1548
Belarus	0.74	0.79	0.87	59662.50	927
Belgium	0.88	0.98	0.76	531766.94	1299
Bosnia	0.69	0.48	0.23	19781.78	672
Bulgaria	0.63	0.75	0.71	65132.95	1214
Croatia	0.67	0.57	0.67	60805.66	1388
Czech Republic	0.79	0.74	0.64	244105.22	1189
Denmark	0.97	0.88	0.81	351299.59	1360
Estonia	0.88	0.69	0.71	30284.89	1283
Finland	0.87	0.85	0.87	275683.14	1243
France	0.81	0.80	0.64	2777535.24	1541
Georgia	0.60	0.59	0.58	16209.82	1196
Germany	0.84	0.77	0.68	3996759.29	1898
Greece	0.70	0.79	1.26	218031.84	1241
Hungary	0.77	0.71	0.48	155703.07	987
Ireland	0.85	0.63	0.78	375902.68	1239
Italy	0.61	0.70	0.63	2073901.99	1518
Kazakhstan	0.76	0.57	0.53	170538.87	476
Latvia	0.81	0.68	0.88	34849.08	1116
Lithuania	0.78	0.68	0.71	53251.37	1232
Moldova	0.76	0.43	0.41	11309.08	1568
Netherlands	0.93	0.91	0.80	912872.33	1349
Norway	0.97	0.82	0.82	434750.94	1259
Poland	0.76	0.60	0.67	585782.87	1097
Portugal	0.74	0.65	0.63	237978.94	1209
Romania	0.64	0.54	0.48	239552.52	1202
Russia	0.76	0.74	0.82	1657553.77	1336
Serbia	0.70	0.56	0.66	50508.37	1342
Slovak Republic	0.82	0.54	0.48	106472.19	1188
Spain	0.85	0.80	0.91	1426189.14	1215
Sweden	0.96	0.87	0.64	551031.68	1337
Switzerland	0.94	0.74	0.58	705501.30	1419
Ukraine	0.57	0.69	0.83	130832.37	1607
United Kingdom	0.95	0.83	0.59	2825207.95	1665

Logistic Regression Results

```
reg <- df %>%
  mutate(`Pro Abortion` = relevel(as.factor(abortion2),
                                  ref = "Pro_Life"),
         `Marriage Equality` = relevel(as.factor(gay_marriage2),
                                       ref = "Against_Marriage_Equality"),
         `Ok with Jewish Neighbor` = relevel(as.factor(jews_neighbor),
                                              ref = "Rejects_Jews"),
         `Ok with Muslim Neighbor` = relevel(as.factor(muslims_neighbor),
                                              ref = "Rejects_Muslims"),
         `Respondent is Religious` = relevel(as.factor(religious),
                                             ref = "Not Religious")) %>%
  rename(`Water Border` = p_combwater,
         `Mountainous Border` = p_mount_tot,
         `Percentage Internet Users` = interusers,
         `Percentage Urban Residents` = perc_urban,
         `Logged GDP` = 1_GDP,
         `Percentage Tertiary Educ'= tert)
model1 <- glm(`Pro Abortion` ~ `Water Border` +</pre>
                  `Mountainous Border` +
                  `Percentage Internet Users` +
                  `Percentage Urban Residents` +
                  `Percentage Tertiary Educ` +
                  `Logged GDP` +
                  Respondent is Religious,
                data = reg,
                family = "binomial"(link="logit"))
model2 <- glm(`Marriage Equality` ~ `Water Border` +</pre>
                  `Mountainous Border` +
                  `Percentage Internet Users` +
                  `Percentage Urban Residents` +
                  `Percentage Tertiary Educ` +
                  `Logged GDP` +
                  Respondent is Religious,
                data = reg,
                family = "binomial"(link="logit"))
model3 <- glm(`Ok with Jewish Neighbor` ~ `Water Border` +
                  `Mountainous Border` +
                  `Percentage Internet Users` +
                  `Percentage Urban Residents` +
                  `Percentage Tertiary Educ` +
                  `Logged GDP` +
                  `Respondent is Religious`,
                data = reg,
                family = "binomial"(link="logit"))
model4 <- glm(`Ok with Muslim Neighbor` ~ `Water Border` +</pre>
                  `Mountainous Border` +
```

Table 3: Full Regression Results of Four Dependent Variables

		Dependent variable:				
	Pro Abortion	Marriage Equality	Ok with Jewish Neighbor	Ok with Muslim Neighbor		
	(1)	(2)	(3)	(4)		
Independent Variables						
Water Border	1.449***	1.951***	3.122***	4.434***		
	(0.049)	(0.048)	(0.068)	(0.051)		
Mountainous Border	2.463***	2.905***	5.585***	11.675***		
	(0.062)	(0.068)	(0.088)	(0.068)		
Country-Level Controls						
Percentage Internet Users	29.114***	325.856***	22.494***	4.054***		
	(0.118)	(0.131)	(0.161)	(0.130)		
Percentage Urban Residents	1.044***	1.022***	1.027***	1.013***		
	(0.001)	(0.002)	(0.002)	(0.001)		
Percentage Tertiary Educ	0.986***	0.991***	0.990***	0.993***		
	(0.001)	(0.001)	(0.001)	(0.001)		
Logged GDP'	1.080***	1.613***	0.946***	1.122***		
	(0.010)	(0.011)	(0.013)	(0.010)		
Individual-Level Controls						
Respondent is Religious	0.529***	0.581***	1.081***	1.030***		
. 0	(0.023)	(0.024)	(0.031)	(0.024)		
Constant	0.010***	0.00001***	0.210***	0.063***		
	(0.116)	(0.135)	(0.156)	(0.122)		
Observations	44,708	44,708	44,708	44,708		
Log Likelihood	-23,889.130	-21,853.460	-15,727.390	-22,935.600		
Akaike Inf. Crit.	47,794.250	43,722.920	31,470.780	45,887.190		

Note: Standard Errors In Parentheses; Coeffients as Odds-Ratios

*p<0.1; **p<0.05; ***p<0.01

Appendix

```
model1a <- glm(`Pro Abortion` ~ `Water Border` +</pre>
                   `Percentage Internet Users` +
                   `Percentage Urban Residents` +
                   `Percentage Tertiary Educ` +
                   `Logged GDP` +
                   `Respondent is Religious`,
                data = reg,
                family = "binomial"(link="logit"))
model1b <- glm(`Pro Abortion` ~</pre>
                   `Mountainous Border` +
                  `Percentage Internet Users` +
                   `Percentage Urban Residents` +
                   `Percentage Tertiary Educ` +
                  `Logged GDP` +
                  `Respondent is Religious`,
                data = reg,
                family = "binomial"(link="logit"))
stargazer(model1a, model1b, model1,
          title="Regression Results for Abortion Attitudes",
          align=TRUE,
          apply.coef = exp,
          notes = "Standard Errors In Parentheses; \\ Coefficients as Odds-Ratios",
          notes.append = TRUE)
% Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
% Date and time: Tue, Feb 18, 2020 - 9:35:42 PM % Requires LaTeX packages: dcolumn
model2a <- glm(`Marriage Equality` ~ `Water Border` +</pre>
                   `Percentage Internet Users` +
                   `Percentage Urban Residents` +
                   `Percentage Tertiary Educ` +
                   `Logged GDP` +
                   `Respondent is Religious`,
                data = reg,
                family = "binomial"(link="logit"))
model2b <- glm(`Marriage Equality` ~</pre>
                  `Mountainous Border` +
                  `Percentage Internet Users` +
                   `Percentage Urban Residents` +
                   `Percentage Tertiary Educ` +
                   `Logged GDP` +
                   Respondent is Religious,
                data = reg,
                family = "binomial"(link="logit"))
stargazer(model2a, model2b, model2,
          title="Regression Results for Marriage Equality Attitudes",
          align=TRUE,
          apply.coef = exp,
          notes = "Standard Errors In Parentheses; \\ Coefficients as Odds-Ratios",
          notes.append = TRUE)
```

Table 4: Regression Results for Abortion Attitudes

		Dependent varia	ble:
		'Pro Abortion	4
	(1)	(2)	(3)
'Water Border'	1.134***		1.449***
	(0.047)		(0.049)
'Mountainous Border'		2.123***	2.463***
		(0.059)	(0.062)
'Percentage Internet Users'	33.385***	30.290***	29.114***
	(0.116)	(0.117)	(0.118)
'Percentage Urban Residents'	1.036***	1.044***	1.044***
O	(0.001)	(0.002)	(0.001)
'Percentage Tertiary Educ'	0.987***	0.987***	0.986***
·	(0.001)	(0.001)	(0.001)
'Logged GDP'	1.143***	1.115***	1.080***
	(0.009)	(0.009)	(0.010)
'Respondent is Religious'Religious	0.530***	0.531***	0.529***
	(0.023)	(0.023)	(0.023)
Constant	0.008	0.007	0.010
	(0.115)	(0.106)	(0.116)
Observations	44,708	44,708	44,708
Log Likelihood	-23,998.930	-23,917.300	-23,889.130
Akaike Inf. Crit.	48,011.850	47,848.600	47,794.250

Note:

*p<0.1; **p<0.05; ***p<0.01 Standard Errors In Parentheses; Coefficients as Odds-Ratios

% Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu % Date and time: Tue, Feb 18, 2020 - 9:35:43 PM % Requires LaTeX packages: dcolumn

Table 5: Regression Results for Marriage Equality Attitudes

		Dependent varia	ble:
		'Marriage Equali	ity'
	(1)	(2)	(3)
'Water Border'	1.468***		1.951***
	(0.045)		(0.048)
'Mountainous Border'		2.064***	2.905***
		(0.064)	(0.068)
'Percentage Internet Users'	544.787***	379.722***	325.856***
	(0.127)	(0.130)	(0.131)
'Percentage Urban Residents'	1.010***	1.020***	1.022***
	(0.001)	(0.002)	(0.002)
'Percentage Tertiary Educ'	0.993***	0.994***	0.991***
	(0.001)	(0.001)	(0.001)
'Logged GDP'	1.739***	1.722***	1.613***
	(0.010)	(0.010)	(0.011)
'Respondent is Religious'Religious	0.589***	0.589***	0.581***
	(0.024)	(0.024)	(0.024)
Constant	0.00001	0.00000	0.00001
	(0.135)	(0.126)	(0.135)
Observations	44,708	44,708	44,708
Log Likelihood	-21,979.820	-21,949.760	-21,853.460
Akaike Inf. Crit.	43,973.640	43,913.510	43,722.920

Note:

*p<0.1; **p<0.05; ***p<0.01

Standard Errors In Parentheses; Coeffients as Odds-Ratios

- % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
- % Date and time: Tue, Feb 18, 2020 9:35:44 PM % Requires LaTeX packages: dcolumn

Table 6: Regression Results for Jewish Neighbor Acceptance Attitudes

		Dependent varia	ble:
		Ok with Jewish Nei	ghbor'
	(1)	(2)	(3)
'Water Border'	2.154***		3.122***
	(0.065)		(0.068)
'Mountainous Border'		3.966***	5.585***
		(0.086)	(0.088)
'Percentage Internet Users'	26.035***	26.981***	22.494***
_	(0.155)	(0.156)	(0.161)
'Percentage Urban Residents'	1.012***	1.023***	1.027***
_	(0.002)	(0.002)	(0.002)
'Percentage Tertiary Educ'	0.994***	0.996***	0.990***
· ·	(0.001)	(0.001)	(0.001)
Logged GDP	1.046***	1.048***	0.946***
	(0.012)	(0.011)	(0.013)
'Respondent is Religious'Religious	1.076***	1.087***	1.081***
	(0.030)	(0.030)	(0.031)
Constant	0.181	0.066	0.210
	(0.148)	(0.141)	(0.156)
Observations	44,708	44,708	44,708
Log Likelihood	-15,946.600	-15,872.500	-15,727.390
Akaike Inf. Crit.	31,907.200	31,759.000	$31,\!470.780$

Note:

*p<0.1; **p<0.05; ***p<0.01

Standard Errors In Parentheses; Coeffients as Odds-Ratios

```
model4a <- glm(`Ok with Muslim Neighbor` ~ `Water Border` +</pre>
                  `Percentage Internet Users` +
                  `Percentage Urban Residents` +
                  `Percentage Tertiary Educ` +
                  `Logged GDP` +
                  `Respondent is Religious`,
                data = reg,
                family = "binomial"(link="logit"))
model4b <- glm(`Ok with Muslim Neighbor` ~</pre>
                  `Mountainous Border` +
                  `Percentage Internet Users` +
                  `Percentage Urban Residents` +
                  `Percentage Tertiary Educ` +
                  `Logged GDP` +
                  Respondent is Religious,
                data = reg,
                family = "binomial"(link="logit"))
stargazer(model4a, model4b, model4,
          title="Regression Results for Muslim Neighbor Acceptance Attitudes",
          align=TRUE,
          apply.coef = exp,
          notes = "Standard Errors In Parentheses; \\ Coefficients as Odds-Ratios",
          notes.append = TRUE)
```

- % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
- % Date and time: Tue, Feb 18, 2020 9:35:46 PM % Requires LaTeX packages: dcolumn

Table 7: Regression Results for Muslim Neighbor Acceptance Attitudes

		Dependent varia	ble:
		Ok with Muslim Ne	ighbor'
	(1)	(2)	(3)
'Water Border'	2.633***		4.434***
	(0.049)		(0.051)
'Mountainous Border'		7.677***	11.675***
		(0.068)	(0.068)
'Percentage Internet Users'	5.891***	8.187***	4.054***
	(0.123)	(0.124)	(0.130)
'Percentage Urban Residents'	0.992***	1.007***	1.013***
O	(0.001)	(0.002)	(0.001)
'Percentage Tertiary Educ'	0.997***	1.001***	0.993***
· ·	(0.001)	(0.001)	(0.001)
Logged GDP	1.303***	1.268***	1.122***
	(0.009)	(0.009)	(0.010)
'Respondent is Religious'Religious	1.036***	1.050***	1.030***
	(0.023)	(0.024)	(0.024)
Constant	0.046	0.012	0.063
	(0.115)	(0.109)	(0.122)
Observations	44,708	44,708	44,708
Log Likelihood	-23,702.110	-23,377.590	-22,935.600
Akaike Inf. Crit.	$47,\!418.220$	46,769.170	$45,\!887.190$

Note:

*p<0.1; **p<0.05; ***p<0.01 Standard Errors In Parentheses; Coefficients as Odds-Ratios