

**Why Do States Join Some Universal Treaties but not Others? An
Analysis of Treaty Commitment Preferences**

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September 22, 2014
Forthcoming, *Journal of Conflict Resolution*

Supplementary Information

A. W-NOMINATE Model Fit

This section discusses the fit of the W-NOMINATE model to the treaty commitment data. The first issue to address is the correct number of dimensions to include in the model. The crux of this question is as follows: While the underlying data can be analyzed in n -dimensions, how many of these dimensions are sufficiently substantively meaningful? Poole (2005) suggests that a preliminary determination can be made by plotting the normalized eigenvalues of the double-centered agreement score matrix produced by W-NOMINATE. Because the eigenvalues measure the fit of the underlying data, they are likely to flatten out when the dimensions are no longer meaningful. Figure 5 shows plots of eigenvalues against their dimensions for 1980, 1990, 2000 and 2008. The eigenvalues begin to flatten out after the third (or fourth in 2008) dimension, which suggests that there are two latent dimensions in the data. I continue the analysis using two-dimensional models.

The algorithm converges on estimated state and treaty locations when the probability of the observed treaty ratifications is maximized. The extent to which the W-NOMINATE model fits the data is therefore based on how well it predicts actual treaty ratification behavior. The model will not correctly predict all treaty ratifications, resulting in both false positives (i.e., cases where a country is predicted to ratify a treaty but does not do so) and false negatives (i.e., cases where a country is predicted not to ratify a treaty but nonetheless does so). Table 4 lists, for 2008, the ten countries with the most predicted ratifications, false positives, predicted non-ratifications and false negatives. European states dominate the list of states with the most correctly predicted treaty ratifications. Note that these are not simply states that ratify many treaties, but also ones that *predictably* ratify such treaties. This is intuitively not surprising, especially as these countries are often at the forefront of setting the agenda for international lawmaking. States that predictably ratify few treaties include small island states, extremely poor states such as Somalia and Equatorial Guinea, and relatively new states such as East Timor. These states may have little incentive to participate in the institutions created by many of

these treaties. Interestingly, a few states appear to have both many false positives and false negatives, including the United States, Switzerland and Cuba. This suggests that the model is relatively weak at predicting the treaty ratification behavior of these states, i.e., that these states tend to be the most idiosyncratic in terms of treaty ratification.

Three standardized measures of fit have been developed to compare results using multidimensional scaling methods (Poole and Rosenthal 1997; Poole 2005). The first is the percentage of choices included in the underlying data that are correctly classified by the model. This measure gives an overall sense of how well treaty ratifications fit each of the dimensions and provides an indication of the extent to which the second dimension is significant relative to the first. One limitation of this measure, however, is that it does not take into account the underlying distribution of 1s and 0s in the data, which is likely to be uneven. This problem is addressed by a second measure, the aggregate proportional reduction in error (APRE), which provides the percentage reduction in classification errors provided by W-NOMINATE relative to a model that assumes all states ratify the same treaties as the majority of states. The APRE is calculated by dividing (1) the sum of all minority choices subtracted by classification errors; by (2) the sum of minority choices. A highly effective method of determining the effect of adding dimensions to the model involves subtracting the APRE for a one-dimensional model from the APRE for a two-dimensional model, which controls for the size of the majority and provides a measure of the net benefit of adding the second dimension. Finally, the geometric mean probability (GMP) reflects how well each state's actual choices reflect those predicted by the model. The GMP is calculated by taking the exponential of the average log-likelihood of observed decisions.

Table 5 provides the measures of fit for several years of the treaty data. For comparison, Table 5 also provides comparable measures provided by Poole and Rosenthal (1997) for the U.S. House of Representatives; Hix, Noury and Rolan (2006) for the European Parliament; and Voeten (2000) for the UNGA. The first dimension appears to explain about 82% of the variance in the treaty data, whereas the second dimension

explains only an additional 2%. Most importantly, this suggests the first dimension is meaningful and predicts treaty commitment to a significant extent. This also suggests that the second dimension is not especially significant and minor differences in states' locations along that dimension may not be particularly meaningful. The measures of fit are comparable to those of the other data, especially the Congressional data. It is notable that the APRE2-APRE1 statistic is significantly larger for the treaty data than for the U.S. House and UNGA, which means that adding the second dimension to the model does more to improve fit with respect to the treaty commitment data. Nonetheless, the decline in this statistic over time suggests the second dimension has become less important.

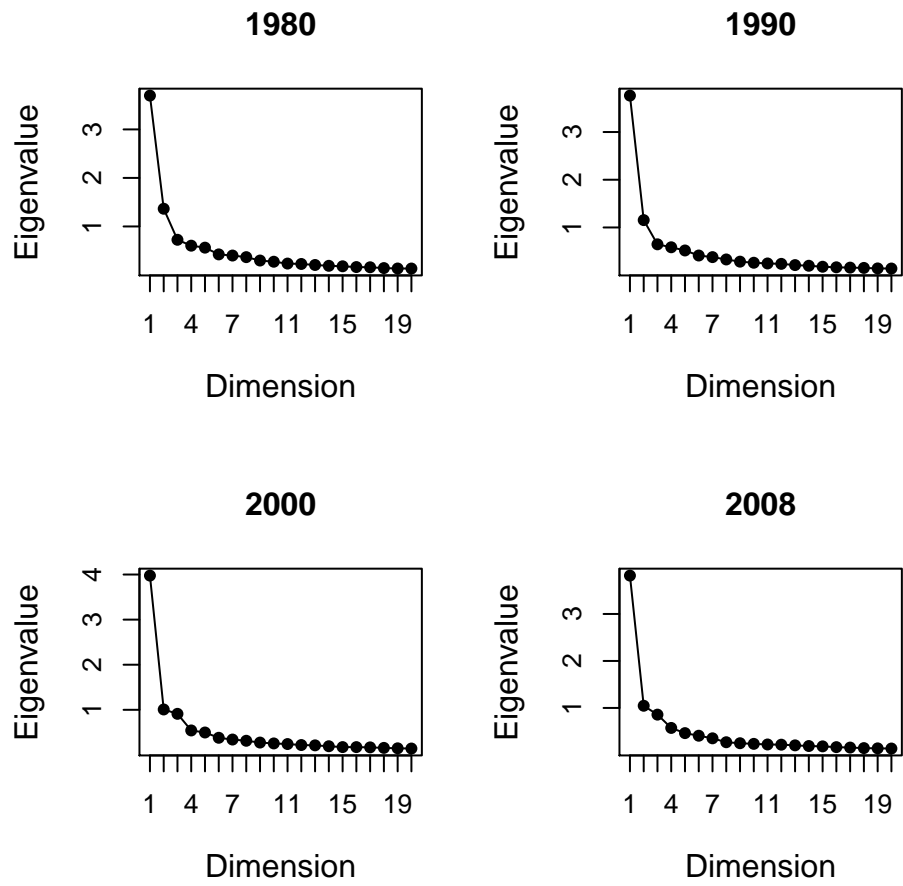


Figure 4: Scree plots of W-NOMINATE models in 1980, 1990, 2000, and 2008.

Table 4: Top 10 States by W-NOMINATE Classification Results in 2008

Most Ratifications Correctly Predicted	Most False Positives	Most Non-Ratifications Correctly Predicted	Most False Negatives
Netherlands	Montenegro	Tuvalu	Liberia
Norway	United States	Palau	Mexico
Denmark	Luxembourg	Bhutan	United States
Sweden	Switzerland	Micronesia	Cuba
Finland	Liberia	East Timor	Sri Lanka
Germany	Russia	Marshall Islands	Switzerland
Belgium	Cuba	Brunei	Montenegro
Austria	Bosnia	Somalia	Panama
United Kingdom	Austria	Eritrea	Canada
Slovakia	Czech Republic	Equatorial Guinea	Uzbekistan

Table 5: Measures of Fit for Universal Treaty Data and Other Data

Data	Classification % 1 dim	Classification % 2 dim	APRE1	APRE2	APRE2- APRE1	GMP1	GMP2
Treaties 1960	86.7	89.7	26.5	42.5	16.0	0.70	0.78
Treaties 1970	81.8	84.4	26.9	37.5	10.6	0.66	0.71
Treaties 1980	82.5	84.6	27.4	36.1	8.7	0.68	0.71
Treaties 1990	82.6	84.2	27.3	34.2	6.9	0.67	0.70
Treaties 2000	83.2	84.7	24.6	31.5	6.9	0.67	0.70
Treaties 2008	82.5	84.3	21.8	29.7	7.9	0.67	0.70
U.S. House 1960	82.7	84.4	47.9	53.1	5.2	0.68	0.70
Eur. Parl. 1979-1984	86.0	91.5	46.9	67.6	20.7	—	—
UNGA 1991-1996	91.8	93.0	62.1	67.7	5.6	—	0.83

B. W-NOMINATE Results

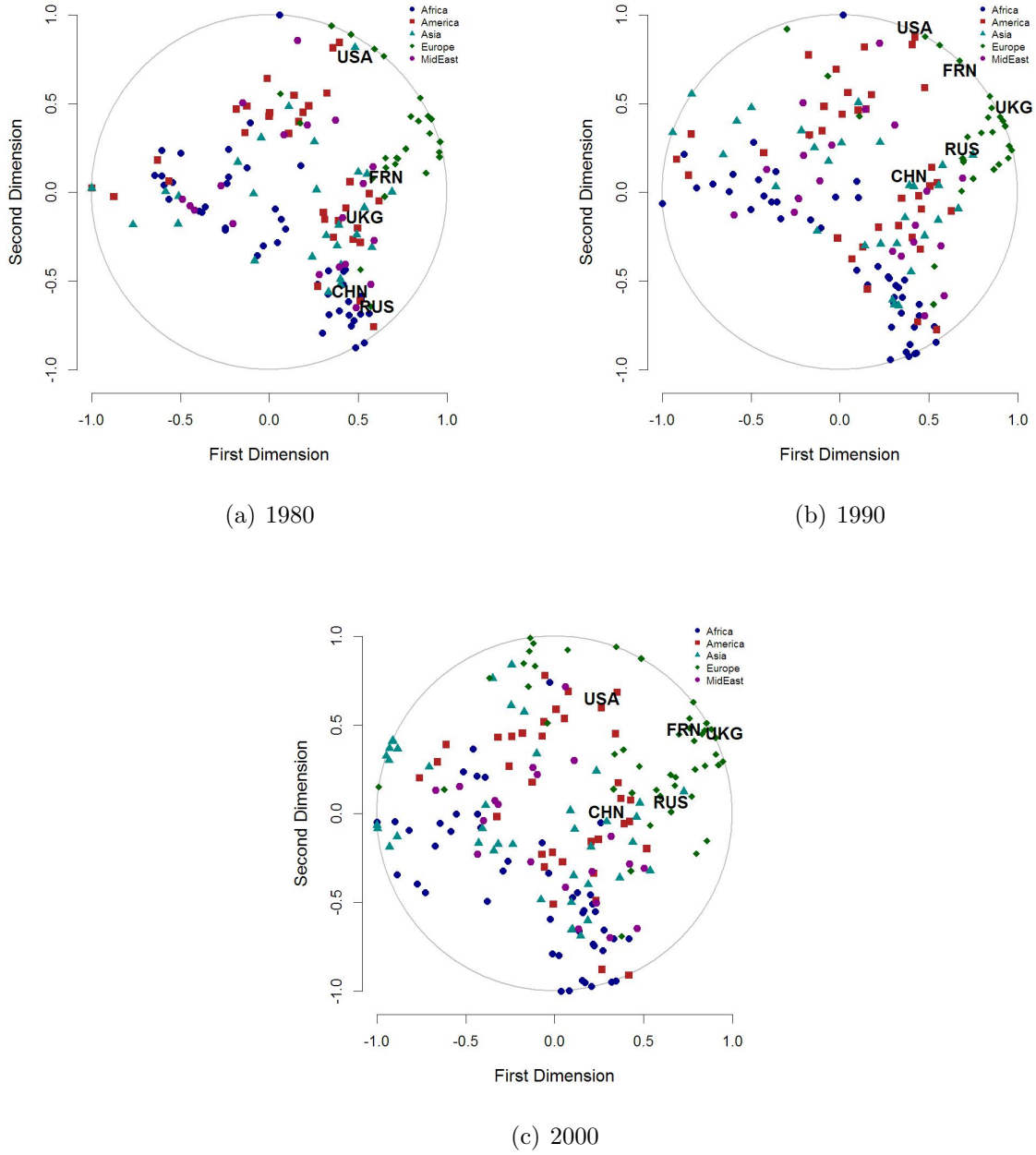
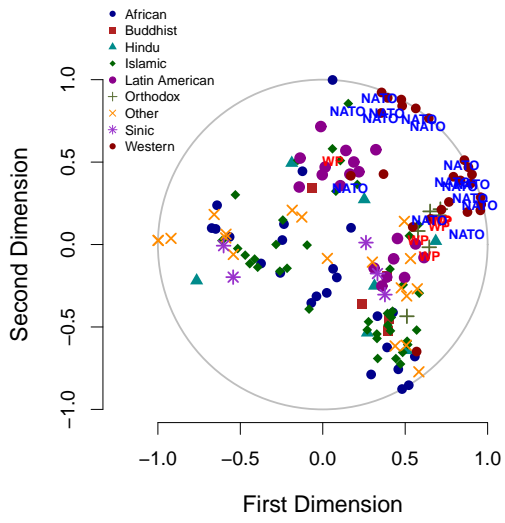
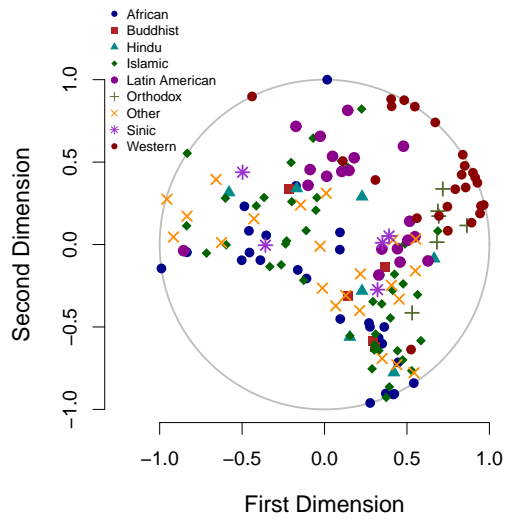


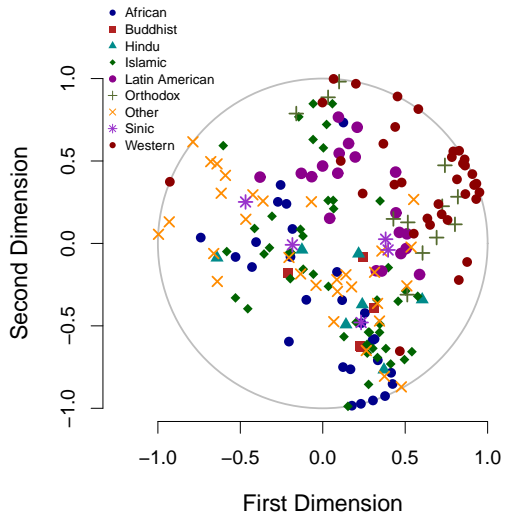
Figure 5: W-NOMINATE coordinates by region. The locations of the five permanent members of the U.N. Security Council are noted.



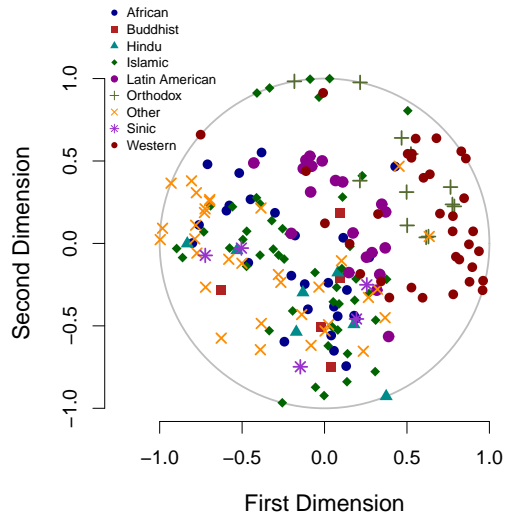
(a) 1980



(b) 1990



(c) 2000



(d) 2008

Figure 6: W-NOMINATE coordinates by civilization. Locations of NATO and Warsaw Pact members in 1980 are highlighted.

C. Additional Monadic Analysis of W-NOMINATE Space

Table 6: States by W-NOMINATE First Coordinate Results in 2008

Coordinate	Country	Coordinate	Country	Coordinate	Country
-.9990172	Palau	.0571168	Azerbaijan	.3713074	Mauritius
-.9311035	Nauru	.0624179	Liechtenstein	.3742744	Jamaica
-.9238074	Andorra	.0624412	Bangladesh	.3815322	South Korea
-.7873867	Eritrea	.0653277	Syria	.3837181	Niger
-.7862357	Kiribati	.0668265	Tonga	.3858897	Malawi
-.6799299	Tuvalu	.0738198	Togo	.3959315	China
-.6618867	Samoa	.0850253	Dominica	.3971999	Iran
-.6419761	Federated States of Micronesia	.0887746	St. Lucia	.4121722	Algeria
-.6419639	Bhutan	.0898443	Venezuela	.4143743	Uganda
-.6400064	Sao Tome and Principe	.0941172	Colombia	.4237201	Ghana
-.6167678	Vanuatu	.098449	El Salvador	.4281877	Belarus
-.6046422	Brunei	.0993626	Moldova	.4340228	Lithuania
-.5912411	Marshall Islands	.1083086	Iceland	.4392766	Canada
-.5829484	Comoros	.1173627	Botswana	.4417268	Mexico
-.5295327	Equatorial Guinea	.1225765	Central African Republic	.4441936	Uruguay
-.5292137	Guinea-Bissau	.1237226	South Africa	.4495445	Portugal
-.4686768	North Korea	.1276821	Gambia	.4570076	Pakistan
-.4672028	St. Kitts and Nevis	.1400147	Guyana	.4647347	Chile
-.4564514	Somalia	.1401659	Antigua Barbuda	.4675457	Malta
-.4292377	Angola	.1485856	Sierra Leone	.4736248	Brazil
-.4259801	Grenada	.1557645	Costa Rica	.4770989	Trinidad and Tobago
-.4145049	United Arab Emirates	.1679143	Rwanda	.4773603	Estonia
-.4065928	Swaziland	.1747737	Bahamas	.4955571	Senegal
-.3804792	Belize	.1784137	Zambia	.5035375	Tunisia
-.3631482	San Marino	.1963008	Peru	.5059327	Ecuador
-.3552146	Chad	.199203	Latvia	.5098637	Philippines
-.3241459	Djibouti	.2019411	Libya	.5104162	Argentina
-.3153866	Qatar	.203917	Turkey	.5135658	Cyprus
-.2730508	Liberia	.2080505	Panama	.5161479	Ukraine
-.2558848	Namibia	.2161141	Sri Lanka	.5356017	Japan
-.2213773	Cape Verde	.2274133	Cambodia	.5405402	Morocco
-.2161572	Myanmar	.2297846	Laos	.5512253	Macedonia
-.2070629	Congo	.2325609	Singapore	.5527417	New Zealand
-.2062185	Papua New Guinea	.2336203	Gabon	.5759273	Egypt
-.2051743	Mauritania	.2379687	Tanzania	.5766876	Switzerland
-.1963729	Sudan	.2396263	Nepal	.5871929	Cuba
-.1959204	Burundi	.2421754	Israel	.6033765	India
-.1920221	Oman	.2427102	Mongolia	.6053863	Bosnia and Herzegovina
-.1846601	Mozambique	.254813	Zimbabwe	.6345534	Slovenia
-.1839151	Vietnam	.2634965	Democratic Republic of the Congo	.6505864	Ireland
-.1617524	Armenia	.2683843	Iraq	.690775	Russia
-.1459238	Tajikistan	.2695982	Malaysia	.7015072	Croatia
-.1352877	Solomon Islands	.277436	Nigeria	.7213809	Poland
-.1352769	Saudi Arabia	.2827525	Mali	.7249309	Romania
-.1318376	Honduras	.2876181	Burkina Faso	.7302029	Greece
-.1206942	Yemen	.2961678	Madagascar	.7572483	Australia
-.1196541	Afghanistan	.3018138	Kenya	.7830621	Spain
-.1138737	Suriname	.3033943	Indonesia	.7919481	Luxembourg
-.1001265	Benin	.3095746	Thailand	.801762	Bulgaria
-.0694383	St. Vincent and the Grenadines	.3130121	Lesotho	.8138761	Belgium
-.0589723	Kazakhstan	.3138647	Fiji	.8139675	Italy
-.0586564	Turkmenistan	.3237994	Nicaragua	.8195096	Hungary
-.0579405	Paraguay	.3285732	Kuwait	.8253863	Czech Republic
-.0574699	Maldives	.3316169	Barbados	.8506743	United Kingdom
-.042757	Ethiopia	.3324031	Ivory Coast	.8625563	France
-.0053577	Bolivia	.3333162	Cameroon	.8650367	Germany
-.0031215	Monaco	.3435918	Haiti	.8683527	Austria
.0023521	Kyrgyzstan	.3440176	Guinea	.8759291	Slovakia
.0221717	Albania	.3459741	Jordan	.8964203	Norway
.0309828	Georgia	.3481117	Uzbekistan	.9185109	Sweden
.0313969	Lebanon	.3570356	Guatemala	.9291482	Netherlands
.0342399	Bahrain	.3585395	Seychelles	.9306988	Finland
.0410398	Dominican Republic	.3674774	United States of America	.9458476	Denmark

C.1 Movement in W-NOMINATE Space Over Time

I continue the analysis by examining the movement of key states in the preference space. Figure 7 shows the movement of the five permanent members of the U.N. Security Council along the first dimension since 1960. The preferences of most of the great powers are relatively stable over time. China, however, moves rapidly along the first dimension in the late 1970s. This period in China's history witnessed the takeover by Deng Xiaoping and the beginning of the reforms intended to modernize China and integrate it into the global economy. During this era, China ratified many treaties intended to facilitate trade and other economic cooperation. Its movement along the first dimension toward the more developed economies during this era suggests the first dimension may reflect the extent of a state's interest in international economic cooperation and interdependence within the global economy. It is also remarkable how closely correlated the movements of the United States and China have been along the first dimension since 1980. This means that the United States and China have had similar preferences along the first dimension since 1980, which further suggests the dimension is more likely to be one of economic interests than factors such as regime type, region and civilization, along which the two powers clearly differ. Finally, the fact that the U.S. and U.S.S.R. are consistently on the same side of the first dimension weighs against the Cold War being a key determinant of treaty commitment preferences. Indeed, the lack of significant movement by the great powers after the end of the Cold War suggests this change in the structure of international relations did not have a significant impact on treaty commitment preferences.

Other states have also moved significantly in the treaty preference space. Figure 7 shows the movement over time of the four states that have moved the furthest along the first dimension: Uruguay, Paraguay, Mali and South Korea. These cases may be especially informative as to the substantive meaning of the coordinates. All of these moved in the same direction, although at different times. Analyzing these periods in these states' histories may help to explain the first dimension. South Korea's major movement occurred

in the late 1970s, during the Fourth Republic and the lead-up to the assassination of President Park Chung-hee. This was a period of significant domestic oppression, but also of increased South Korean interest in multilateral economic cooperation, leading up to the normalization of relations between China and the United States. Uruguay's treaty preference shift also occurred in the late 1970s, in the middle of a period of civil-military dictatorship. The president during this period, Aparicio Méndez, instituted domestic economic reforms and began opening up Uruguay's economy to cooperation with other states. Mali's significant movement along the first dimension occurred in 1967, the year in which Mali reformed many domestic economic policies and rejoined the Franc currency zone. In 1967, Mali ratified many treaties intended to facilitate economic cooperation. Paraguay's movement along the first dimension has been more gradual. During the period of this movement, Paraguay experienced a transition to democracy as well as significant increases in trade and income, so the Paraguay case is less informative as its preference shift may have been due to multiple factors. Nonetheless, the cases of Uruguay, South Korea and Mali indicate that as states seek to open up economic relations with the world their treaty commitment preferences tend to change such that they move in a single direction along the first dimension.

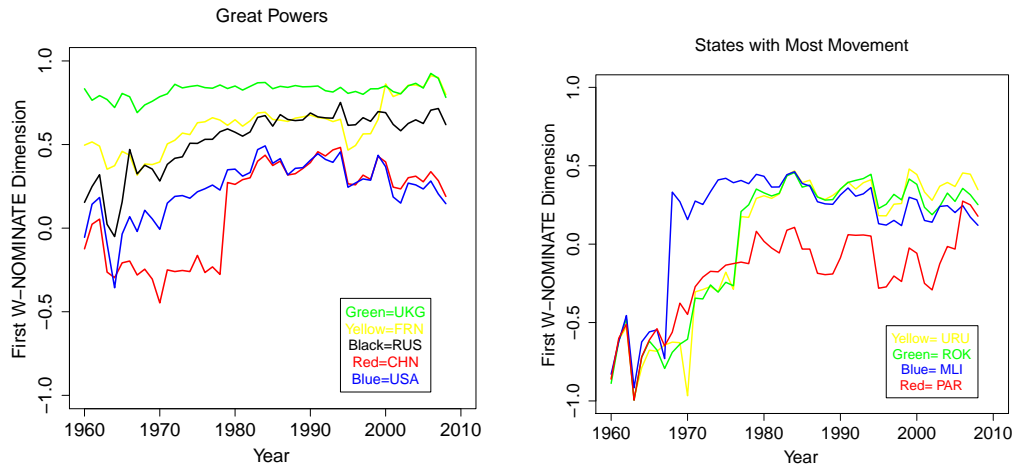


Figure 7: Movement of the great powers along the first W-NOMINATE dimension and positions of states with the most movement, 1960-2008.

C.2 Analysis of Normal Vectors

In this section, I interpret the treaty preference space by using normal vector analysis. Normal vectors in the preference space that are close to parallel to the dimensional axes may reveal the meanings of those dimensions. The first step is to estimate the following OLS model:

$$Y = \beta_1 X_1 + \beta_2 X_2 + \varepsilon \tag{1}$$

where Y is a vector of country-year data (e.g., trade, GDP), X_1 is the vector of first-dimension W-NOMINATE coordinates and X_2 is the vector of second-dimension W-NOMINATE coordinates. The coordinates (x, y) of the normal vector are obtained using the following equations:

$$x = \frac{\beta_1}{\sqrt{\beta_1^2 + \beta_2^2}} \qquad y = \frac{\beta_2}{\sqrt{\beta_1^2 + \beta_2^2}} \tag{2}$$

The normal vector is plotted along the line that connects the points (x, y) and $(-x, -y)$. I estimate the normal vectors for several variables. I use the same data sources described in the paper. I use the measures of Affinity toward the U.S. and U.S.S.R. developed by Gartzke (2006) as indicators of preference similarity to the U.S. and U.S.S.R.

Figure 7 shows the normal vectors for these variables in 1980, 1990 and 2000. In both 1980 and 1990, none of the normal vectors appears close to parallel to either dimension, although trade is closer to parallel to the first dimension than the other variables. The closeness of the vectors to each other nonetheless demonstrates that rich, powerful, democratic and trade-dependent states tend to have different treaty commitment preferences from poor, weak, autocratic and relatively autarkic states. The vectors are close to each other because the underlying variables are themselves highly correlated. All of these variables may be important in shaping states' treaty commitments, therefore, although because of their correlation with each other we cannot determine their

independent effects using this method.

As of 2000, however, several of the vectors move away from the $x = y$ line and flatten out, most notably the normal vector for trade. The flattening out of several of the vectors in 2000 suggests that these factors, and especially trade, are now closer to the meaning of the first dimension, indicating that they are better predictors of states' treaty commitment preferences. In particular, the movement of the trade vector toward the first dimension during this period suggests that increasing globalization and economic interdependence during the period 1980-2000 resulted in economic activities becoming increasingly important in shaping states' treaty commitment preferences.

To further test the effects of the Cold War, Figure 8 shows the normal vectors for the U.S. and U.S.S.R Affinity scores in 1960, 1970 and 1980. The vectors point in opposite directions because states that tended to have high Affinity scores for the U.S. tended to have low Affinity scores for the U.S.S.R., and vice versa. In 1960, the vectors are close to parallel to the second dimension, with states closer to the U.S. toward the north of the space and those favoring the U.S.S.R. toward the south. This suggests the Cold War may have been the second dimension of treaty commitment preferences during this era. As the Cold War went on, however, the normal vectors move toward the $x = y$ line, which suggests that, as of 1980, Cold War dynamics were less important in determining treaty commitment preferences.

Because the locations of the normal vectors are estimated based on OLS models, there is uncertainty regarding their locations in the preferences space. I therefore created a measure of uncertainty by taking 1000 random draws for the distributions of the estimates for β_1 and β_2 with respect to each of the variables. Plotting the confidence intervals of the normals vectors on the W-NOMINATE space results in figures that are difficult to read, yet it should be noted that (1) the slope of the normal vector for trade is significantly ($p < 0.05$) closer to being parallel to the first dimension than the other normal vectors; and (2) the slope of the normal vector for trade is significantly ($p < 0.05$) different from the

slope of the other normal vectors.

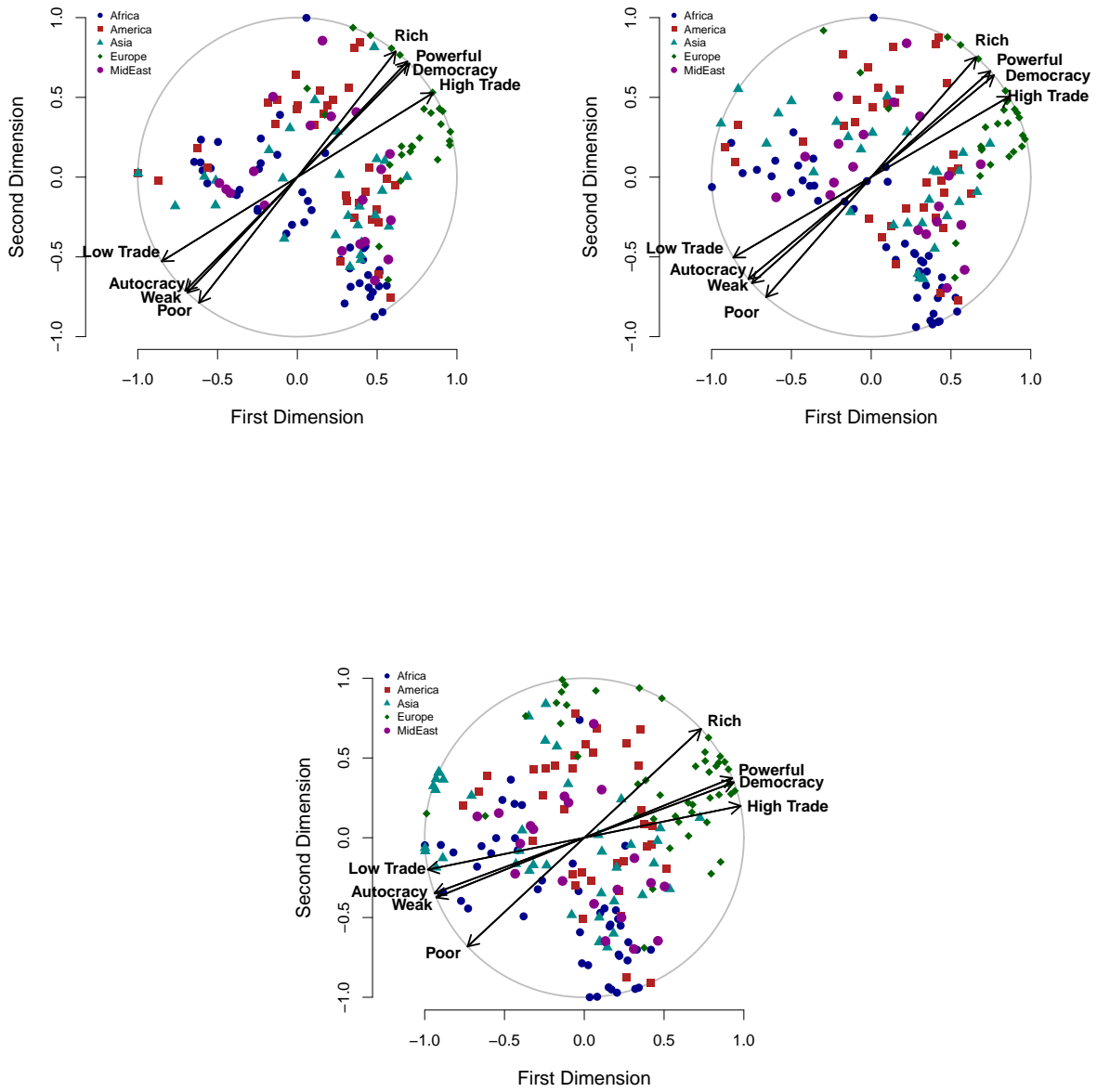


Figure 8: Normal vectors for income, regime type, trade and power in 1980, 1990, and 2000.

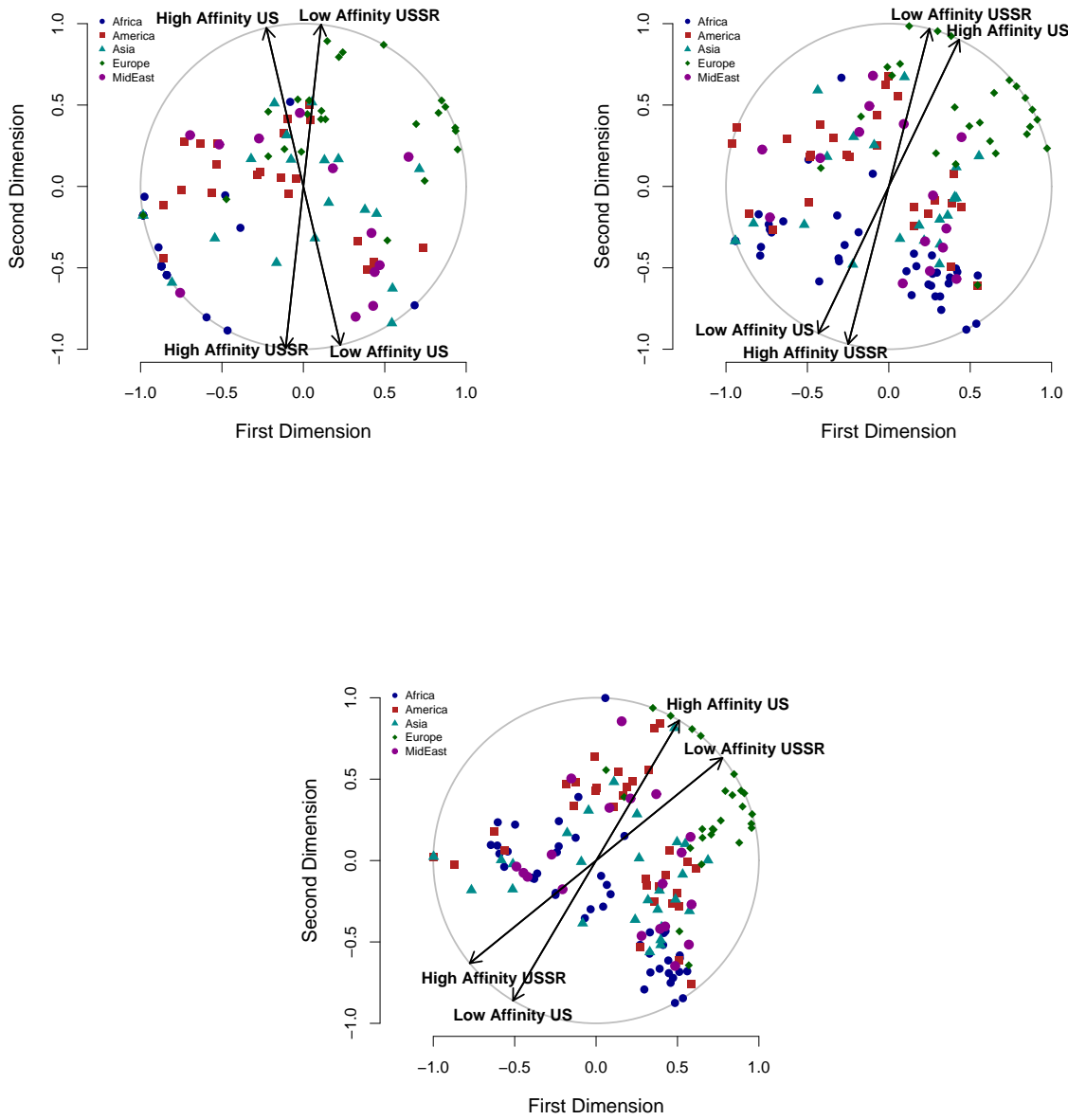


Figure 9: Normal vectors for U.S. Affinity and U.S.S.R. Affinity in 1960, 1970, and 1980.

C.3 Dyadic Regression Results

Table 7: OLS Models of Treaty Commitment Ideal Point Distance

	(1)	(2)
Trade Dependence (Low)	-0.508*** (0.098)	-0.498*** (0.106)
Same Region	-0.007*** (0.001)	-0.005*** (0.001)
Same Civilization	-0.006*** (0.001)	-0.002* (0.001)
Polity Difference	0.000** (0.000)	0.000 (0.000)
GDP Per Capita (logged) Difference	0.008*** (0.000)	0.007*** (0.000)
PolCon V Difference	0.008*** (0.001)	0.005*** (0.001)
Capabilities (logged) Difference	-0.024* (0.011)	-0.075*** (0.012)
Lagged Dependent Variable	0.927*** (0.001)	0.925*** (0.001)
UN Voting Ideal Point Distance		0.005*** (0.000)
Alliance Portfolio S-Score		-0.011*** (0.001)
Constant	0.025*** (0.004)	0.021*** (0.004)
Fixed effects for year	Yes	Yes
<i>N</i>	305539	282068
<i>R</i> ²	0.895	0.898

Robust standard errors in parentheses

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

D. Robustness Tests

Table 8: OLS Models of First-Dimension W-NOMINATE Coordinates
Lags for New States

Variable	1960	1970	1980	1990	2000
Democracy	-0.023 (0.017)	-0.000 (0.014)	-0.003 (0.010)	0.006 (0.008)	0.005 (0.008)
Veto Players	0.423 (0.444)	0.029 (0.380)	0.259 (0.285)	0.245 (0.207)	0.275* (0.141)
Capabilities	-0.730 (2.674)	-0.964 (2.296)	-2.681 (2.468)	-1.684 (2.208)	-1.126 (1.816)
GDP Per Capita (logged)	0.145 (0.134)	0.028 (0.078)	-0.159*** (0.059)	-0.106* (0.058)	-0.031 (0.046)
Total Trade (logged)	0.048 (0.058)	0.069* (0.037)	0.140*** (0.031)	0.114*** (0.029)	0.118*** (0.025)
Asia	0.034 (0.357)	0.138 (0.213)	-0.256 (0.185)	-0.143 (0.162)	-0.098 (0.155)
Europe	0.207 (0.358)	0.500* (0.253)	0.147 (0.219)	0.201 (0.194)	0.323* (0.176)
MidEast	0.074 (0.411)	0.062 (0.266)	-0.215 (0.225)	-0.142 (0.202)	-0.113 (0.184)
Africa	-0.228 (0.434)	0.170 (0.254)	-0.154 (0.218)	-0.162 (0.190)	0.014 (0.186)
Western	-0.303 (0.343)	-0.252 (0.241)	-0.138 (0.197)	-0.140 (0.173)	-0.157 (0.155)
Islamic	-0.307 (0.243)	-0.189 (0.180)	-0.144 (0.151)	-0.057 (0.134)	-0.081 (0.122)
African	-0.006 (0.459)	-0.304 (0.208)	-0.229 (0.180)	-0.043 (0.160)	-0.132 (0.158)
Latin	-0.665* (0.381)	-0.316 (0.215)	-0.213 (0.190)	-0.224 (0.166)	-0.164 (0.162)
Orthodox	-0.531 (0.421)	-0.411 (0.317)	0.023 (0.278)	-0.000 (0.240)	-0.201 (0.182)
Sinic	-0.823** (0.325)	-0.760*** (0.230)	-0.357 (0.229)	-0.248 (0.203)	-0.297 (0.202)
Constant	-0.961 (0.871)	-0.554 (0.526)	0.490 (0.426)	0.176 (0.421)	-0.798** (0.359)
N	75	115	126	125	144
R^2	0.373	0.350	0.417	0.495	0.581

Standard errors in parentheses.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

The baseline region is America.

The baseline civilization includes the states coded by Huntington as “other”.

Table 9: OLS Models of First-Dimension W-NOMINATE Coordinates
Economic Cooperation Treaties Excluded

Variable	1960	1970	1980	1990	2000
Democracy	-0.024** (0.012)	-0.001 (0.013)	-0.003 (0.009)	0.007 (0.008)	0.006 (0.008)
Veto Players	0.437 (0.330)	0.034 (0.365)	0.232 (0.243)	0.208 (0.198)	0.254* (0.136)
Capabilities	-0.928 (1.986)	-1.019 (2.202)	-2.578 (2.109)	-1.913 (2.107)	-1.369 (1.762)
GDP Per Capita (logged)	0.066 (0.098)	0.026 (0.075)	-0.124** (0.051)	-0.102* (0.055)	-0.031 (0.045)
Total Trade (logged)	0.079** (0.039)	0.064* (0.036)	0.122*** (0.026)	0.108*** (0.028)	0.111*** (0.025)
Asia	-0.021 (0.275)	0.118 (0.204)	-0.247 (0.158)	-0.143 (0.154)	-0.102 (0.151)
Europe	0.163 (0.276)	0.460 (0.242)	0.163* (0.187)	0.205 (0.185)	0.327* (0.171)
MidEast	0.126 (0.312)	0.052 (0.255)	-0.201 (0.193)	-0.131 (0.193)	-0.114 (0.178)
Africa	-0.385 (0.306)	0.147 (0.244)	-0.142 (0.186)	-0.157 (0.182)	0.001 (0.181)
Western	-0.231 (0.261)	-0.253 (0.232)	-0.135 (0.168)	-0.150 (0.165)	-0.159 (0.150)
Islamic	-0.260 (0.176)	-0.176 (0.173)	-0.116 (0.129)	-0.065 (0.128)	-0.068 (0.118)
African	-0.060 (0.255)	-0.300 (0.199)	-0.182 (0.153)	-0.057 (0.153)	-0.119 (0.153)
Latin	-0.374 (0.294)	-0.295 (0.207)	-0.211 (0.162)	-0.218 (0.159)	-0.164 (0.157)
Orthodox	-0.615** (0.302)	-0.403 (0.304)	-0.007 (0.238)	-0.042 (0.229)	-0.208 (0.176)
Sinic	-0.728*** (0.223)	-0.737*** (0.221)	-0.250 (0.195)	-0.235 (0.194)	-0.273 (0.196)
Constant	-0.542 (0.629)	-0.445 (0.505)	0.361 (0.364)	0.248 (0.402)	-0.728** (0.349)
<i>N</i>	86	115	126	125	144
<i>R</i> ²	0.491	0.335	0.441	0.485	0.575

Standard errors in parentheses.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

The baseline region is America.

The baseline civilization includes the states coded by Huntington as “other”.

Table 10: OLS Models of First-Dimension W-NOMINATE Coordinates
Bayesian Estimation Models

Variable	1960	1970	1980	1990	2000
Democracy	-0.026** (0.013)	0.000 (0.018)	-0.009 (0.015)	0.007* (0.004)	0.003 (0.007)
Veto Players	0.490 (0.354)	0.024 (0.515)	0.332 (0.403)	-0.016 (0.098)	0.207 (0.130)
Capabilities	-1.243 (2.131)	2.183 (3.111)	-3.414 (3.493)	0.788 (1.042)	-1.840 (1.677)
Per Capita GDP (logged)	0.063 (0.105)	-0.152 (0.106)	-0.154* (0.084)	-0.039 (0.027)	-0.062 (0.042)
Total Trade (logged)	0.091** (0.042)	0.022 (0.050)	0.156*** (0.043)	0.055*** (0.014)	0.108*** (0.023)
Asia	0.062 (0.295)	-0.266 (0.288)	-0.292 (0.262)	0.026 (0.076)	-0.129 (0.143)
Europe	0.241 (0.296)	-0.233 (0.342)	0.126 (0.311)	0.332*** (0.091)	0.095 (0.163)
MidEast	0.209 (0.335)	-0.012 (0.360)	-0.231 (0.319)	0.055 (0.095)	0.000 (0.170)
Africa	-0.446 (0.328)	-0.376 (0.344)	-0.175 (0.308)	-0.071 (0.090)	0.139 (0.172)
Western	-0.229 (0.280)	0.614 (0.327)	-0.412* (0.279)	0.273*** (0.082)	-0.324** (0.143)
Islamic	-0.413** (0.189)	0.063 (0.244)	-0.138 (0.214)	0.008 (0.063)	-0.212* (0.113)
African	-0.164 (0.274)	0.107 (0.282)	-0.250 (0.254)	-0.003 (0.076)	-0.278* (0.146)
Latin	-0.539* (0.315)	0.398 (0.292)	-0.330 (0.268)	0.223*** (0.078)	-0.300** (0.149)
Orthodox	-0.614* (0.324)	0.509 (0.430)	-0.093 (0.394)	0.050 (0.113)	-0.364** (0.168)
Sinic	-0.909*** (0.239)	0.572 (0.312)	-0.435 (0.324)	-0.041 (0.096)	-0.300 (0.186)
Constant	-0.929 (0.675)	0.824 (0.713)	0.068 (0.602)	-0.307 (0.199)	-0.299 (0.332)
<i>N</i>	86	115	126	125	144
<i>R</i> ²	0.587	0.209	0.221	0.820	0.339

Standard errors in parentheses.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

The baseline region is America.

The baseline civilization includes the states coded by Huntington as “other”.

E. Analysis of Second Dimension

This section analyzes the second dimension of the treaty commitment preference space. Figure 10 shows the positions of the five permanent U.N. Security Council members over time. The great powers moved significantly more along the second dimension during this period than along the first dimension. First, China moved far along this dimension in the late 1970s. Interestingly, this moved China away from the United States (and the other Western powers), in contrast with its movement along the first dimension toward those powers. In the 2000s, all of the great powers moved in the same direction along the second dimension, which may mean that the meaning of the second dimension changed during this time.

With respect to the second dimension, the most significant movement was by China, Iran, Australia and Bahrain, as shown in Figure 10. Iran moved significantly along the second dimension in the mid 1970s and again in the early 2000s. The first change coincides with the Shah's abolition of opposition parties. Among other things, this made it easier for the Shah to obtain legislative approval of treaties he had previously signed, and thus Iran ratified many treaties immediately after the creation of one-party rule. In the second period, Iran was ruled by the reformer Mohammad Khatami, who initiated many economic and political reforms, including opening up Iran to international cooperation. Australia is an interesting case, as its most significant movement occurred in 1988 under a newly elected government. The prior election had been called early and featured an unusual double dissolution, such that all seats in the legislature were up for election. The Labor Party consolidated power during the election, which likely means it was able to pass the ratifications of many treaties it did not have the votes to pass earlier. Bahrain is perhaps the oddest case because it moves significantly in one direction, then immediately back in the other direction. This occurred during the 1980s, a particularly tumultuous period that included an attempted Islamist coup and ongoing political uncertainty caused by the Iran-Iraq war. It may be the case that, as a result, Bahrain's treaty ratification behavior

was relatively erratic during this period.

Figure 10 shows the fits of competing OLS models of the second-dimension coordinates. In the 1960s, the second dimension is highly correlated with trade, although this correlation declines in the early 1970s, which is also the era in which the fit of trade with the first dimension improves. Civilization has the best fit with the second dimension. This can be difficult to interpret because it is a categorical variable, but based on the plots in Figure 6, it seems that Western, Orthodox and Latin American states tend to be on one end of this dimension, whereas African, Sinic, Islamic and Buddhist states are mostly on the other end. This suggests that the meaning of the second dimension, especially during the 1960s and 1970s, may be related to cultural issues. As with the first dimension, capabilities are a poor predictor of treaty commitment preferences.

Table 11 shows the results of OLS models of the second-dimension coordinates with all variables included. The two variables most consistently significant are the Western and Latin-American civilizations. This is consistent with the visual finding that these states tend to cluster on one end of the preference space along the second dimension. Interestingly, Voeten (2000) finds that membership in these civilizations is significantly correlated with the first dimension of UNGA voting in the 1990s, whereas with respect to treaty preferences these variables are only significant for the second dimension. This indicates that the determinants of UNGA voting preferences differ substantially from those of treaty commitment preferences.

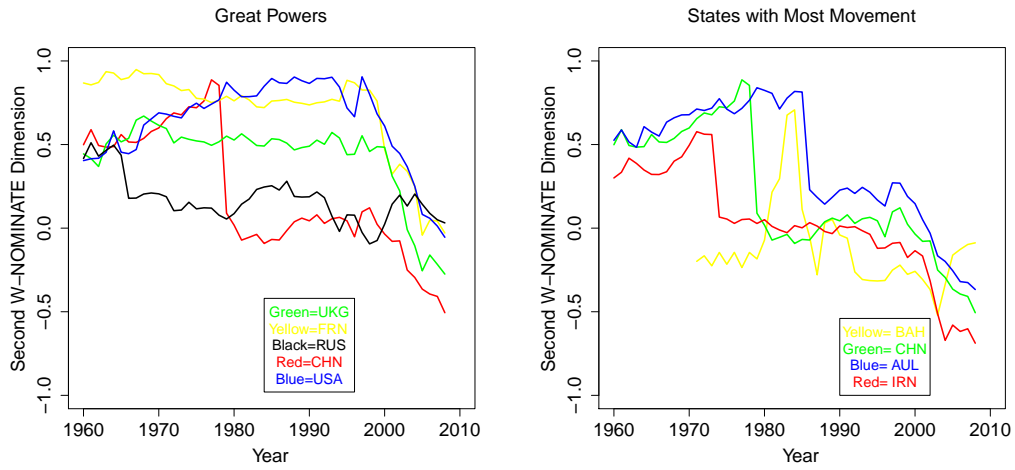


Figure 10: Movement of the great powers along the second W-NOMINATE dimension and positions of states with the most movement, 1960-2008.

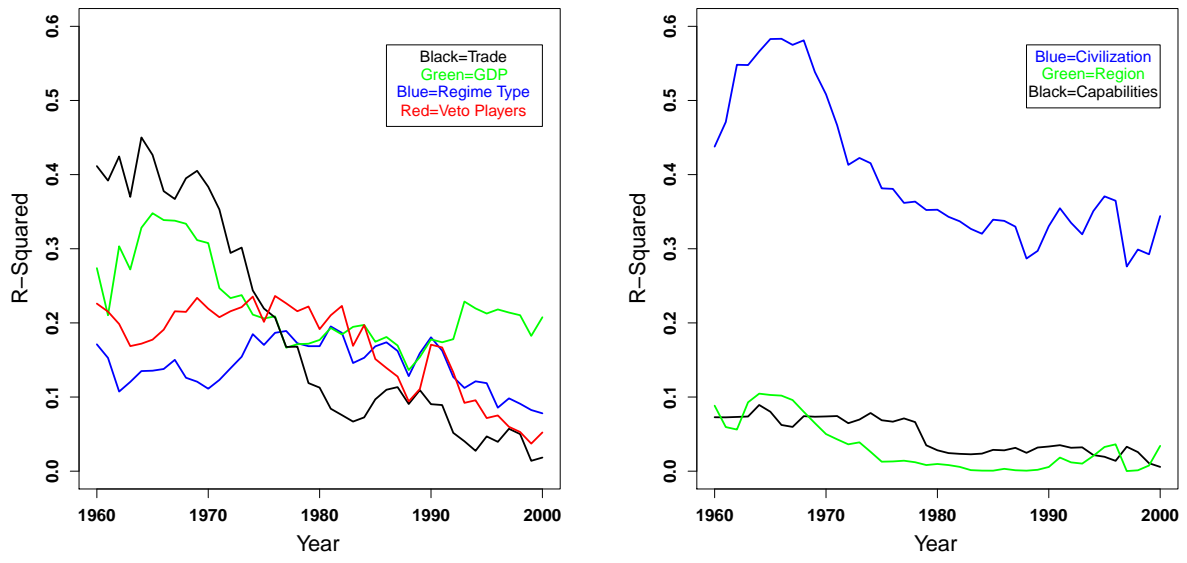


Figure 11: Fits of competing bivariate OLS models of W-NOMINATE second dimension.

Table 11: OLS Models of Second-Dimension W-NOMINATE Coordinates

Variable	1960	1970	1980	1990	2000
Democracy	0.011 (0.010)	-0.007 (0.009)	0.009 (0.010)	0.010 (0.009)	0.009 (0.009)
Veto Players	-0.214 (0.271)	0.176 (0.260)	-0.066 (0.270)	-0.292 (0.241)	-0.249 (0.161)
Capabilities	0.716 (1.628)	3.402** (1.568)	4.353** (2.342)	4.234 (2.567)	3.396 (2.083)
Per Capita GDP (logged)	-0.136** (0.080)	-0.069 (0.054)	-0.015 (0.056)	-0.004 (0.067)	0.099** (0.053)
Total Trade (logged)	0.114*** (0.032)	0.029 (0.025)	-0.030 (0.029)	-0.010 (0.034)	-0.067*** (0.029)
Asia	0.019 (0.225)	0.160 (0.145)	0.209 (0.176)	0.216 (0.188)	0.253 (0.178)
Europe	0.256 (0.226)	0.312** (0.172)	0.198 (0.208)	0.281 (0.225)	0.238 (0.202)
MidEast	-0.064 (0.256)	0.269 (0.182)	0.247 (0.214)	0.247 (0.235)	-0.071 (0.211)
Africa	-0.161 (0.251)	-0.075 (0.173)	-0.062 (0.207)	-0.039 (0.221)	-0.388** (0.214)
Western	0.474*** (0.214)	0.570*** (0.165)	0.735*** (0.187)	0.656*** (0.201)	0.788*** (0.178)
Islamic	0.114 (0.145)	-0.022 (0.123)	0.155 (0.144)	0.112 (0.156)	0.487*** (0.140)
African	0.068 (0.209)	-0.020 (0.142)	0.192 (0.170)	0.098 (0.186)	0.520*** (0.181)
Latin	0.321 (0.241)	0.462*** (0.147)	0.658*** (0.180)	0.724*** (0.193)	0.827*** (0.185)
Orthodox	0.335 (0.248)	0.226 (0.217)	0.215 (0.264)	0.159 (0.279)	0.623*** (0.208)
Sinic	0.025 (0.183)	-0.048 (0.157)	0.021 (0.217)	0.182 (0.236)	0.267 (0.231)
Constant	-0.066 (0.516)	-0.081 (0.359)	-0.040 (0.404)	-0.229 (0.490)	-0.718 (0.412)
<i>N</i>	86	115	126	125	144
<i>R</i> ²	0.617	0.638	0.451	0.432	0.528

Standard errors in parentheses.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

The baseline region is America.

The baseline civilization includes the states coded by Huntington as “other”.

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