

Appendix: The Changing Standard of Accountability and the Positive Relationship between Human Rights Treaty Ratification and Compliance

Christopher J. Fariss*

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*Jeffrey L. Hyde and Sharon D. Hyde and Political Science Board of Visitors Early Career Professor in Political Science, and Assistant Professor, Department of Political Science, Pennsylvania State University, cjf20@psu.edu; cjf0006@gmail.com

Introduction to the Appendix

The supplementary material presented in this document provides additional details about the latent variable model developed in the article “Human Rights Treaty Compliance and the Changing Standard of Accountability”. The main article makes reference to the materials contained here. The code and data files necessary to implement the models in JAGS and R are publicly available at the Harvard Dataverse Network <https://dataverse.harvard.edu/dataverse/CJFariss>, which can be linked to through <http://cfariss.com/>.

A Dynamic Latent Variable Model Parameters from Logit Link Functions

Table 1: Model Parameters that Link the Latent Treaty Variable θ to the Observed Binary Treaty Variables¹

Treaty Name	α_j (std.dev.)	β_j (std.dev.)
Convention on the Prevention and Punishment of the Crime of Genocide	-0.250 (0.092)	1.426 (0.071)
International Convention on the Elimination of All Forms of Racial Discrimination	-0.220 (0.115)	1.771 (0.091)
International Covenant on Civil and Political Rights	-10.678 (1.135)	16.465 (1.437)
International Covenant on Civil and Political Rights Optional Protocol	-4.107 (0.237)	3.170 (0.185)
International Covenant on Economic, Social and Cultural Rights	-6.926 (0.676)	10.062 (0.684)
International Convention on the Suppression and Punishment of the Crime of Apartheid	-0.663 (0.046)	0.491 (0.034)
Convention on the Elimination of all Forms of Discrimination against Women	-4.797 (0.204)	2.356 (0.137)
Convention Against Torture	-0.278 (0.096)	1.322 (0.076)
Convention Against Torture Article 21 (no reservation)	-2.792 (0.195)	2.548 (0.152)
Convention Against Torture Article 22 (no reservation)	-6.794 (0.310)	3.231 (0.200)
Convention on the Rights of the Child	-7.646 (0.371)	3.653 (0.231)
International Covenant on Civil and Political Rights Optional Protocol 2	1.130 (0.077)	0.800 (0.060)
Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families	-5.142 (0.229)	2.231 (0.142)
International Criminal Court	-3.380 (0.133)	0.717 (0.068)
Convention on the Elimination of all Forms of Discrimination against Women Optional Protocol	-2.017 (0.124)	1.039 (0.075)
Convention on the Rights of the Child Optional Protocol 1	-3.526 (0.187)	1.594 (0.111)
Convention on the Rights of the Child Optional Protocol 2	-1.719 (0.124)	0.968 (0.075)
Convention Against Torture Optional Protocol	-1.183 (0.101)	0.623 (0.058)
Convention on the Rights of Persons with Disabilities	-3.682 (0.239)	0.984 (0.104)
Convention on the Rights of Persons with Disabilities Optional Protocol	-2.233 (0.170)	0.549 (0.077)
International Convention for the Protection of All Persons from Enforced Disappearance	-3.391 (0.247)	0.786 (0.102)
International Covenant on Economic, Social and Cultural Rights Optional Protocol	-4.242 (0.339)	0.620 (0.132)
Convention on the Rights of the Child Optional Protocol 3	-6.363 (0.759)	0.545 (0.225)

Note 1: The α_j parameter from the logistic regression that links θ to the observed binary treaty variables, once transformed using the inverse logit function, represents the baseline probability of country-year ratification of treaty j . The β_j parameter represents the strength of the relationship between the θ and the observed binary treaty variable j . The International Covenant on Civil and Political Rights treaty and the International Covenant on Economic, Social and Cultural Rights treaty have the strongest relationship with the latent treaty variable, which suggests that the ratification of these core treaties are the most important for embedding a country within the international human rights regime.

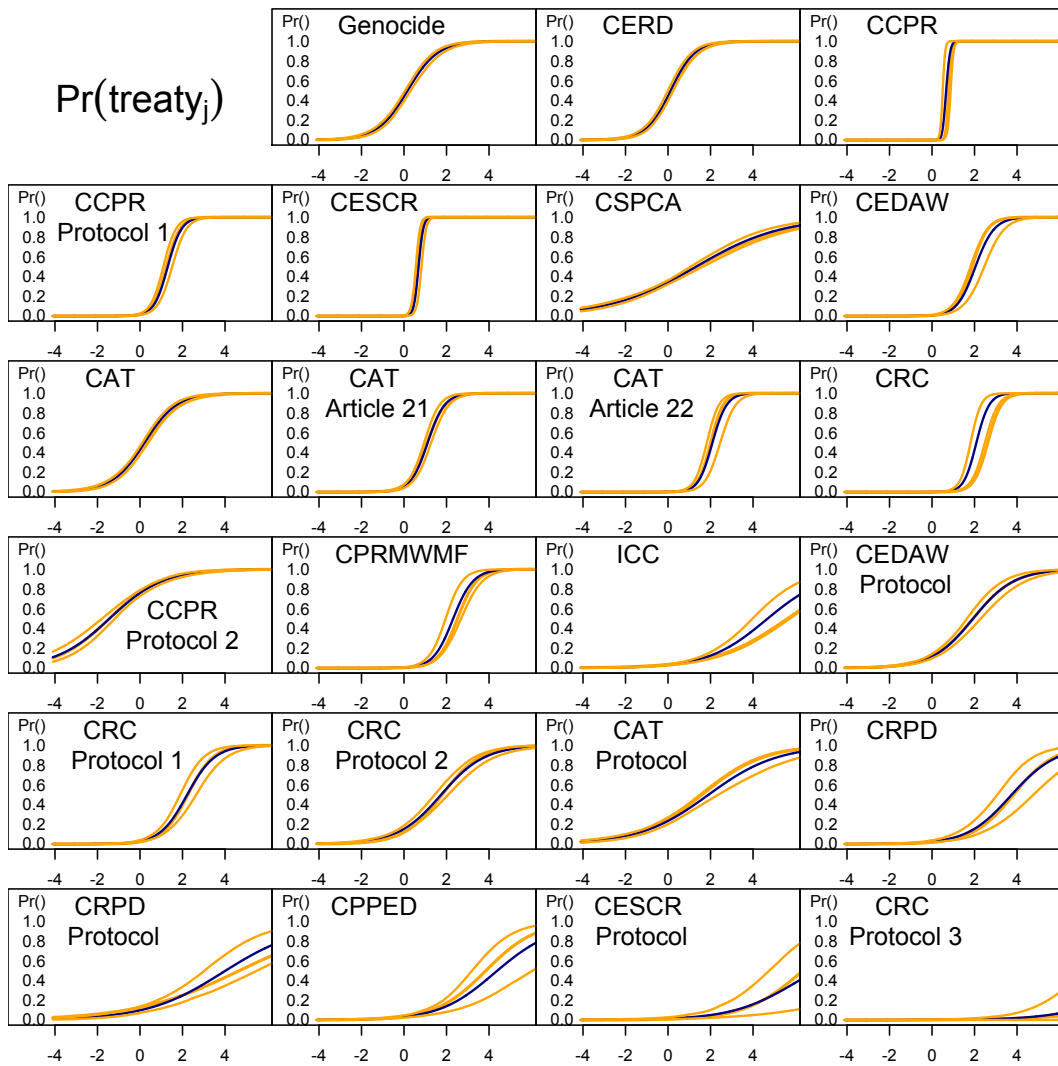


Figure 1: Visualization of the parameters displayed in the Table 1. Each graph represents the probability that a country-year unit has ratified a human rights treaty j across values of the latent variable estimate θ using the logistic regression parameter estimates α_j and β_j for each of the observed binary treaty variable j . As displayed in Table 1, the strength of the relationship between the estimated treaty embeddedness variable and the observed binary treaty variables varies across these indicators. The International Covenant on Civil and Political Rights treaty and the International Covenant on Economic, Social and Cultural Rights treaty have the strongest relationship (largest slope) with the latent treaty variable, which suggests that the ratification of these core treaties are the most important for embedding a country within the international human rights regime.

B Treaty Embeddedness Comparison Plots

Figure 2, 3, 4, 5, 6, Figure 7, and Figure 8 display the rank order of countries by posterior mean in the year 1950, 1960, 1970, 1980, 1990, 2000, and 2010 respectively. Countries shift to the right along the latent variable across decades. For example, the most embedded countries in 1980 are only as embedded as the middle ranked countries in the year 2000.

B.1 1950

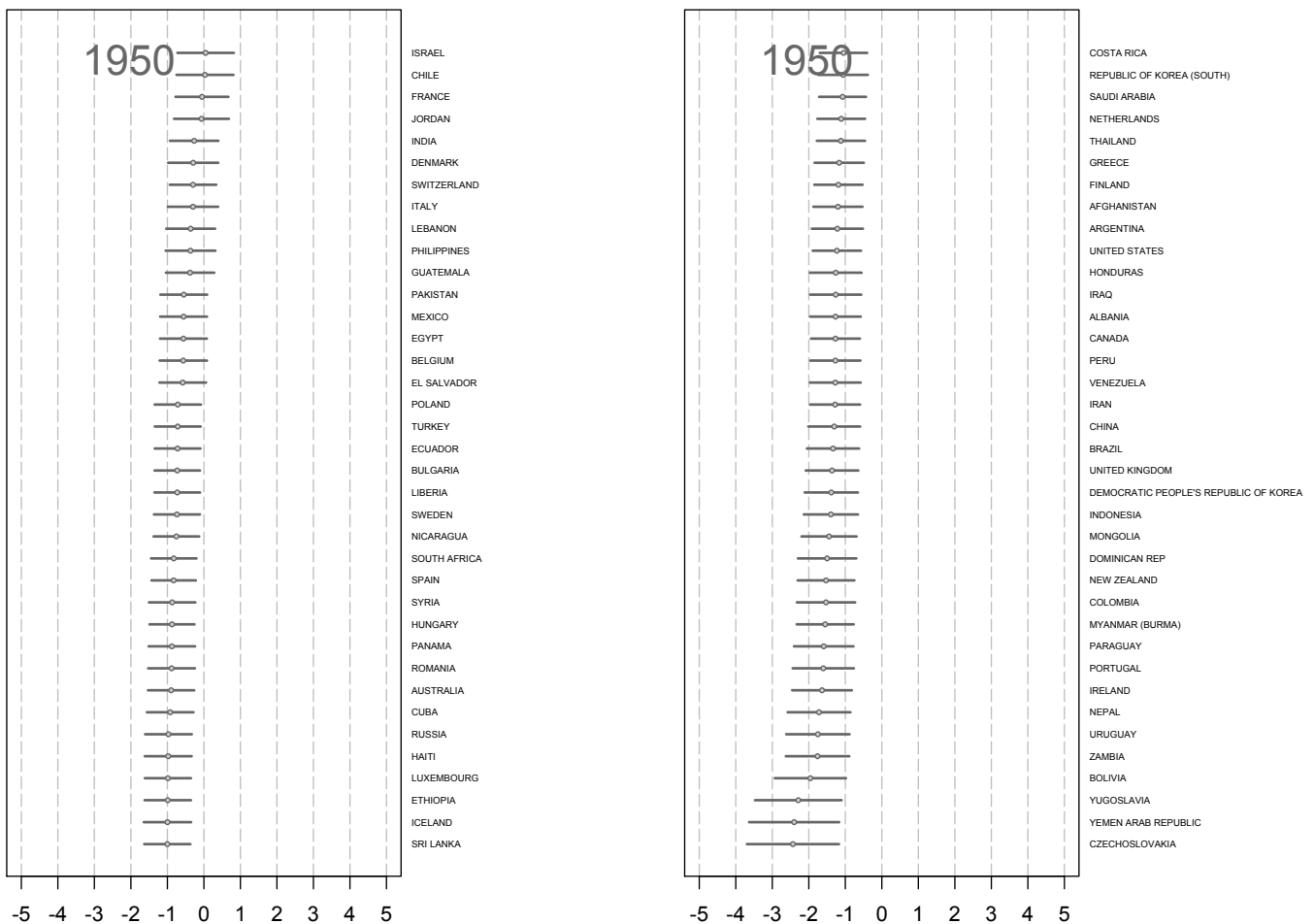


Figure 2: Rank order of countries by posterior mean in the year 1950.

B.2 1960

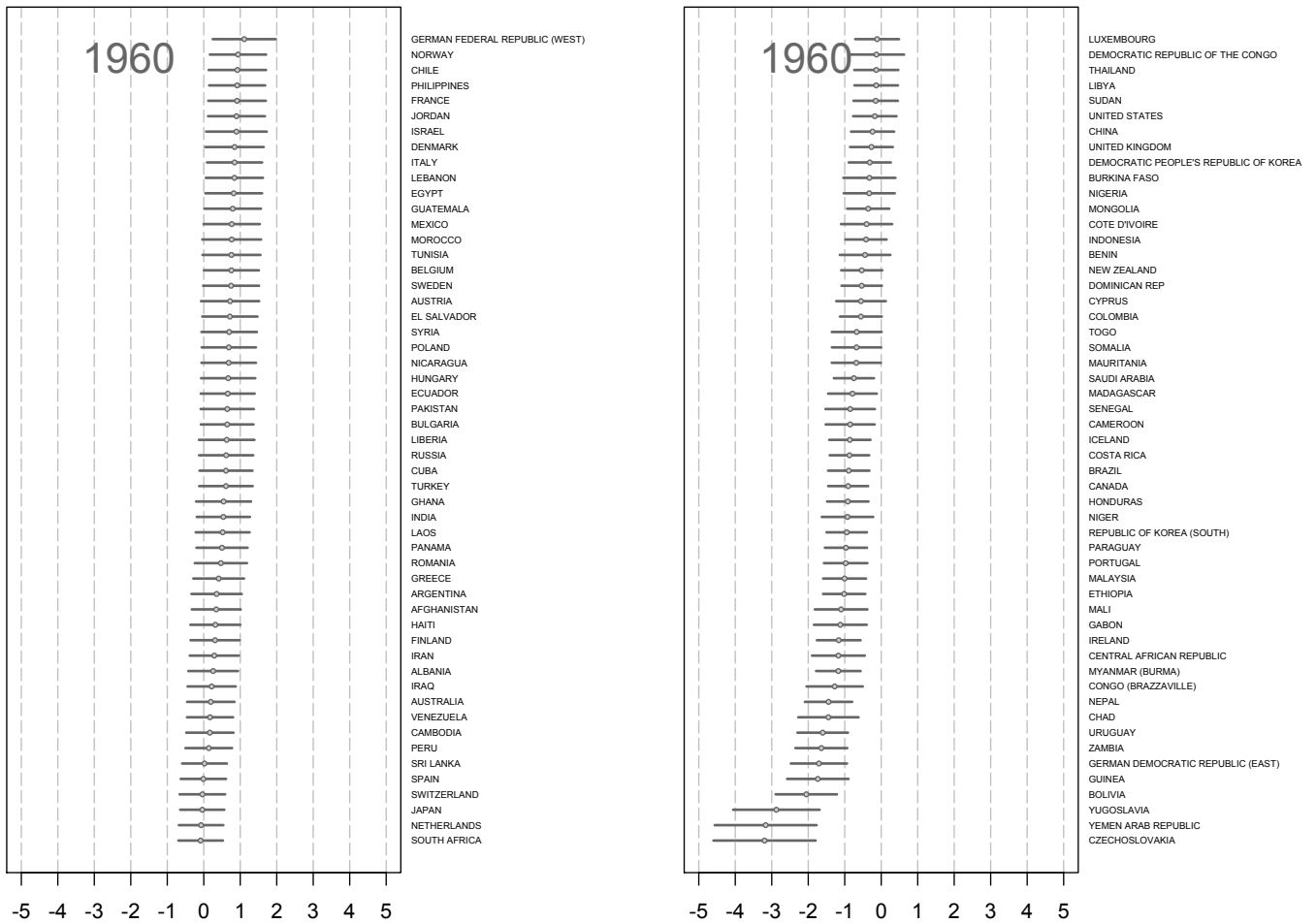


Figure 3: Rank order of countries by posterior mean in the year 1960.

B.3 1970

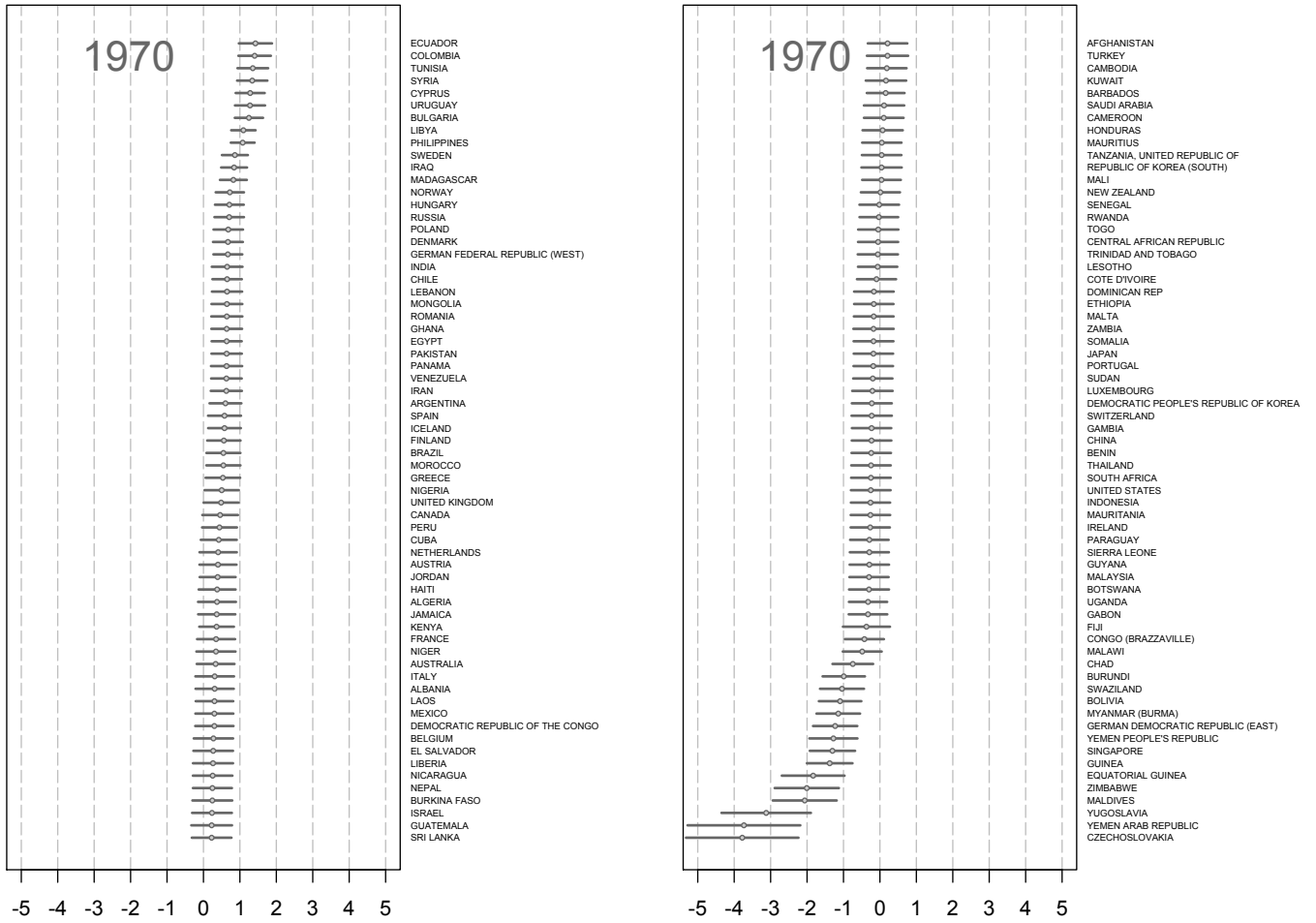


Figure 4: Rank order of countries by posterior mean in the year 1970.

B.4 1980

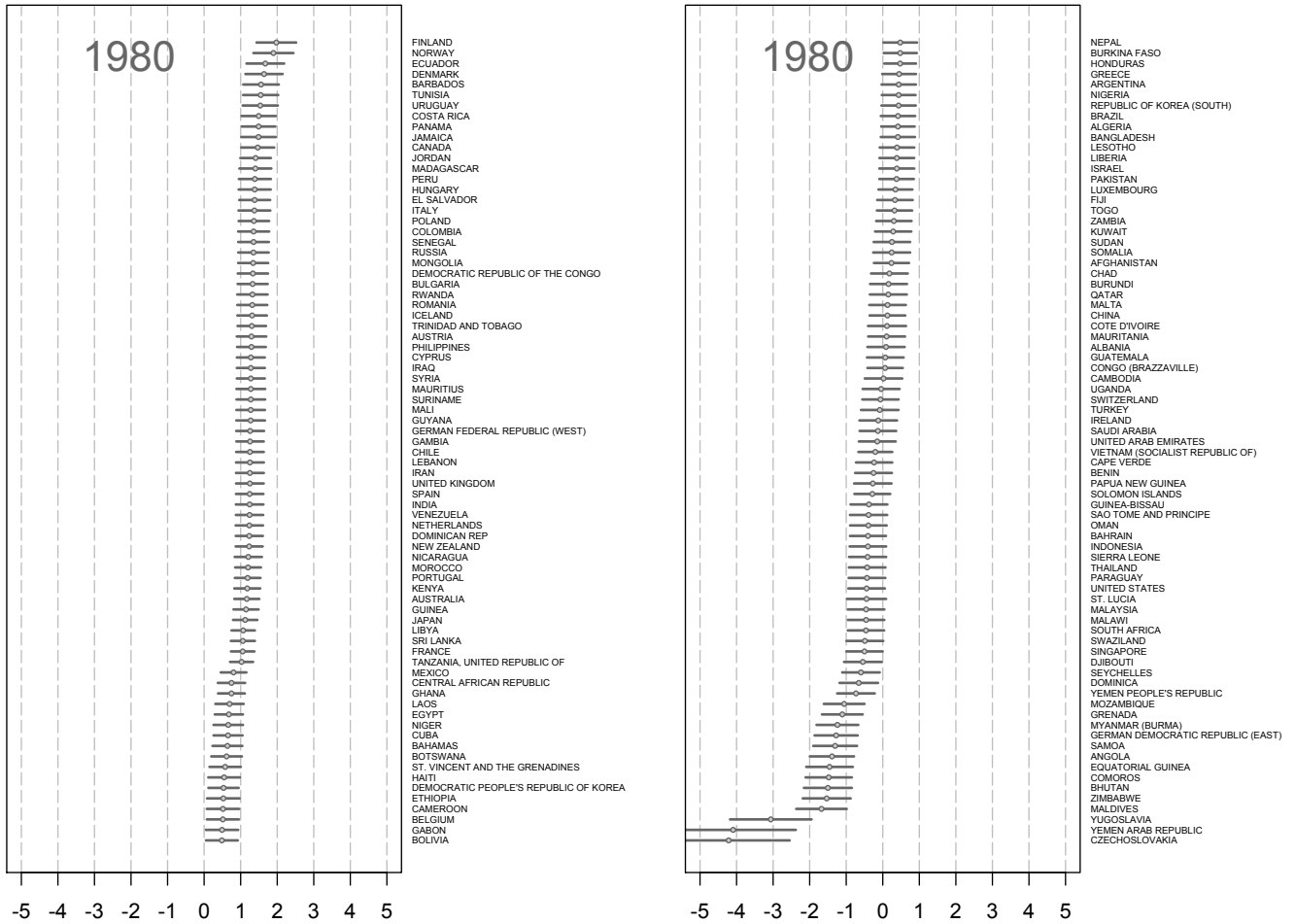


Figure 5: Rank order of countries by posterior mean in the year 1980. The most embedded countries in this year are only as embedded as the middle ranked countries in 2000.

B.5 1990

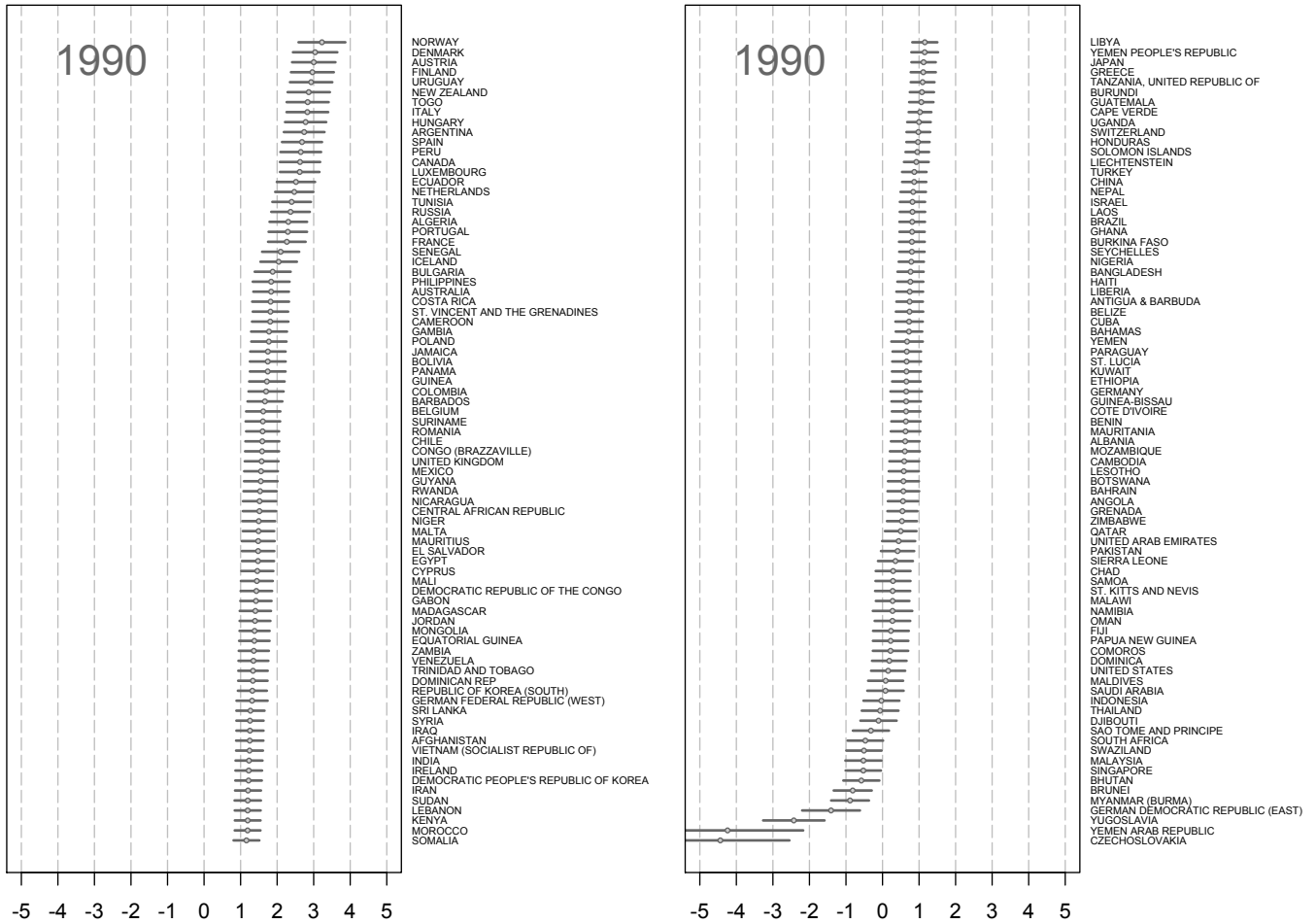


Figure 6: Rank order of countries by posterior mean in the year 1990.

B.6 2000

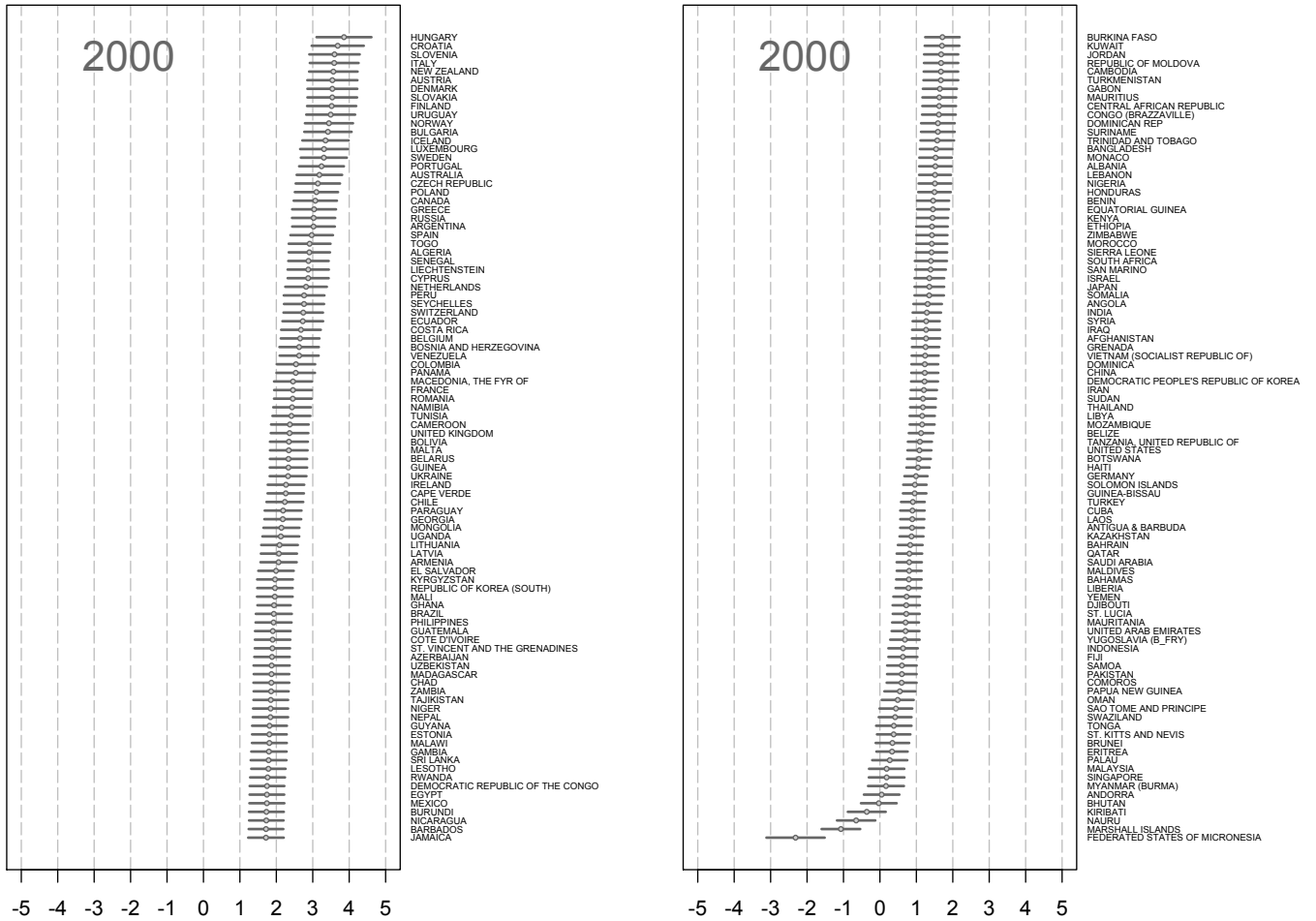


Figure 7: Rank order of countries by posterior mean in the year 2000.

B.7 2010

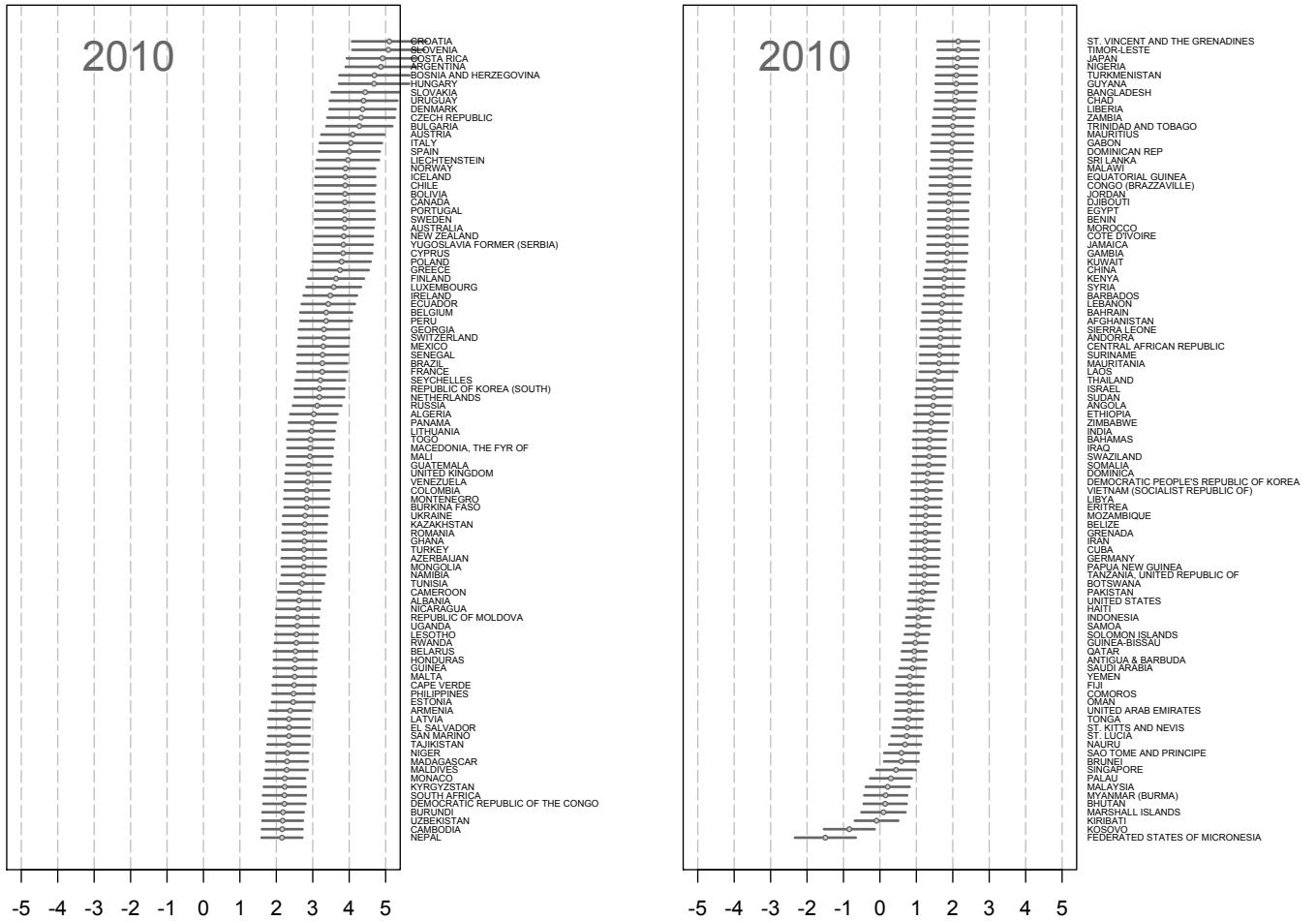


Figure 8: Rank order of countries by posterior mean in the year 2010.

C Human Rights Data Sources

Table 2 and Table 3 contain information about the documentary sources used to generate each of the variables that enter the human rights latent variable models that generate the data used in this paper. For more information on these sources see the original citations and also Fariss (2014).

C.1 Standards-Based Repression Data Sources

Table 2: Standards-Based Repression Data Sources

Dataset Name and Variable Description	Dataset Citation and Primary Source Information
CIRI Physical Integrity Data, 1981-2010 - political imprisonment (ordered scale, 0-2) - torture (ordered scale, 0-2) - extrajudicial killing (ordered scale, 0-2) - disappearance (ordered scale, 0-2)	Cingranelli and Richards (1999, 2012) ; ? Amnesty International Reports ¹ and State Department Reports ² <i>Information in Amnesty reports takes precedence over information in State Department reports</i>
Hathaway Torture Data, 1985-1999 - torture (ordered scale, 1-5)	Hathaway (2002) State Department Reports ¹
Ill-Treatment and Torture (ITT), 1995-2005 - torture (ordered scale, 0-5)	Conrad and Moore (2011) , Conrad, Haglund and Moore (2013) , Amnesty International (2006) Annual Reports ¹ , press releases ¹ , and Urgent Action Alerts ¹
PTS Political Terror Scale, 1976-2010 - Amnesty International scale (ordered scale, 1-5) - State Department scale (ordered scale, 1-5)	Gibney, Cornett and Wood (2012) , Gibney and Dalton (1996) Amnesty International Reports ¹ State Department Reports ¹

1. Primary Source; 2. Secondary Source

C.2 Event-Based Repression Data Sources

Table 3: Event-Based Repression Data Sources

Dataset Name and Variable Description	Dataset Citation and Primary Source Information
Harff and Gurr Dataset, 1946-1988 - massive repressive events (1 if country-year experienced event 0 otherwise)	Harff and Gurr (1988) historical sources (see article references) ¹
Political Instability Task Force (PITF), 1956-2010 - genocide and politicide (1 if country-year experienced event 0 otherwise)	Harff (2003) , Marshall, Gurr and Harff (2009) historical sources (see article references) ¹ State Department Reports ² Amnesty International Reports ²
Rummel Dataset, 1949-1987 - genocide and democide (1 if country-year experienced event 0 otherwise) (3 death count estimates: best, low, high)	Rummel (1994, 1995) , Wayman and Tago (2010) New York Times ¹ , New International Yearbook ² , Facts on File ² , Britannica Book of the Year ² , Deadline Data on World Affairs ² , Kessing's Contemporary Archives ²
UCDP One-sided Violence Dataset, 1989-2010 - government killing (event count estimate) (1 if country-year experienced event 0 otherwise) (3 death count estimates: best, low, high)	Eck and Hultman (2007) , Sundberg (2009) Reuters News ¹ , BBC World Monitoring ¹ Agence France Presse ¹ , Xinhua News Agency ¹ , Dow Jones International News ¹ , UN Reports ² , Amnesty International Reports ² , Human Rights Watch Reports ² , local level NGO reports (not listed) ²
World Handbook of Political and Social Indicators WHPSI, 1948-1982 - political executions (event count estimate) (1 if country-year experienced event 0 otherwise)	Taylor and Jodice (1983) New York Times ¹ , Middle East Journal ² , Asian Recorder ² , Archiv der Genenwart ² African Diary ² , Current Digest of Soviet Press ²

1. Primary Source; 2. Secondary Source

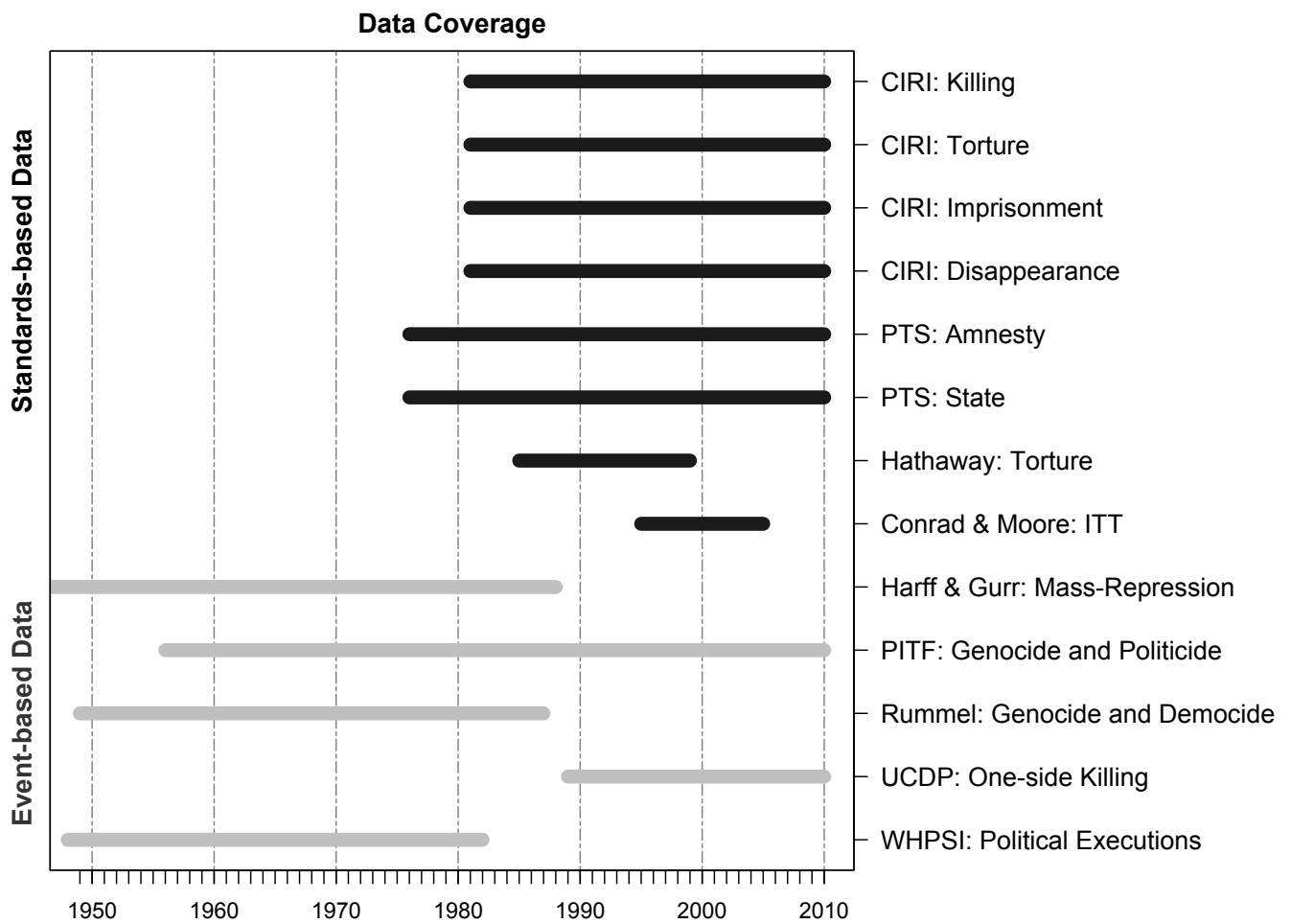


Figure 9: Temporal coverage and data type of repression data sources. The supplementary appendix for more information. Grey lines are event-based variables. Black lines are standards-based variables derived from the content of annual human rights reports. This figure is taken from (Fariss, 2014).

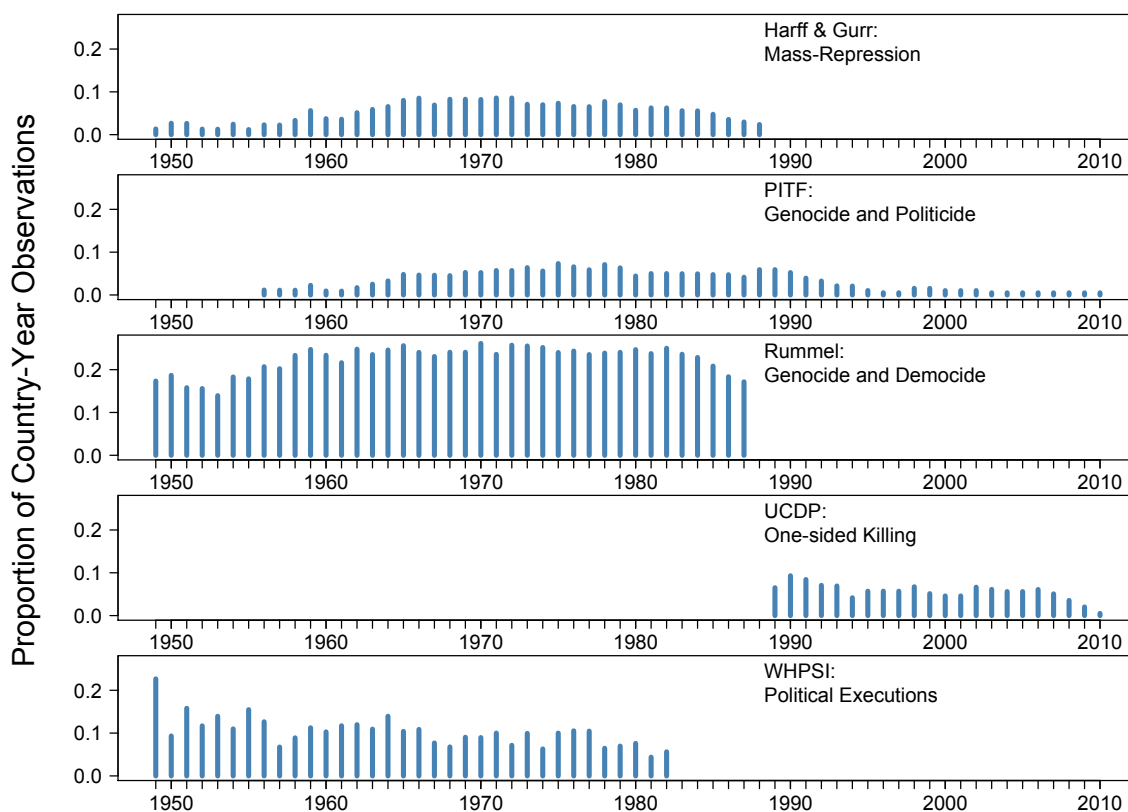


Figure 10: Temporal coverage and proportion of country-year observations that experience one of the 5 event-based types of repression that enter the latent human rights models. While these types of events are increasingly uncommon, they still occur in each year of the data. It is important to note that it is not only the frequency of the event-based indicators that Fariss (2014) uses in the latent variable model but the relative frequency of these values compared to all the other values of the different indicators. For example, there are still many 4s and 5s from the PTS scores today compared to earlier periods. As Fariss (2014) notes regarding the difference between the estimate obtained from the two latent variable models: “In sum, for the constant standard model to be more consistent with reality and for this same pattern [of changes to the latent variable estimates] to obtain [over time], Amnesty International and the US State Department would need to produce human rights reports consistently from year to year *and* the producers of the event-based data (introduced below) would need to use a less and less stringent definition of repression in the assessment of repressive events over time. This is unlikely because the events-based variables ... are consistently updated as new information about the specific events becomes available. In addition to periodic updating, the producers of these events-based variables are focused on the extreme end of the repression spectrum (e.g., genocide, politicide, mass-repression). Both of these features suggest that the event-based data are a valid representation of the historical record to date. The event-based data therefore act as a consistent baseline by which to compare the levels of the standards-based variables, which are produced in a specific historical context and never updated.” (Fariss, 2014, 298). This figure is also presented in the supplementary appendix from (Fariss, 2014), which is available here: http://cfariss.com/documents/Fariss2014APSR_SupplementaryAppendix.pdf.

D Plot of Yearly Human Rights Scores

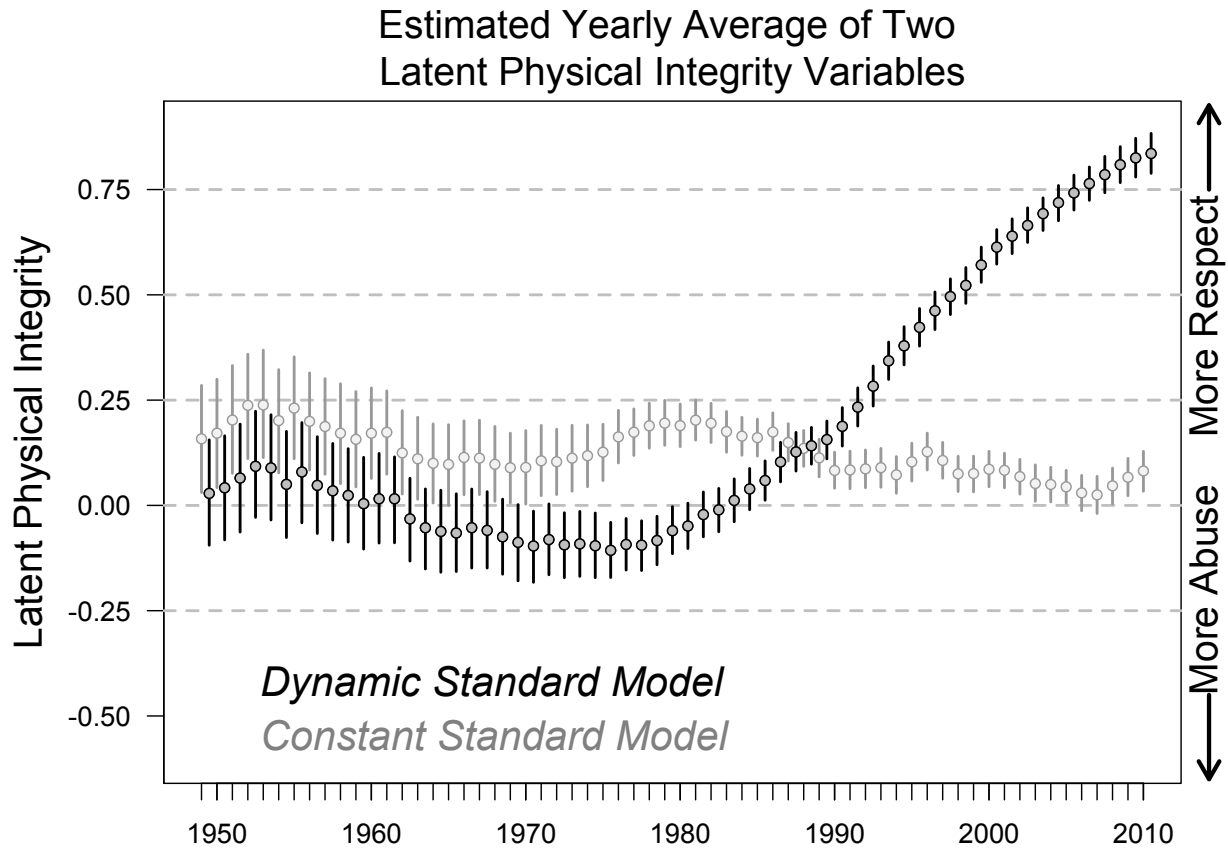


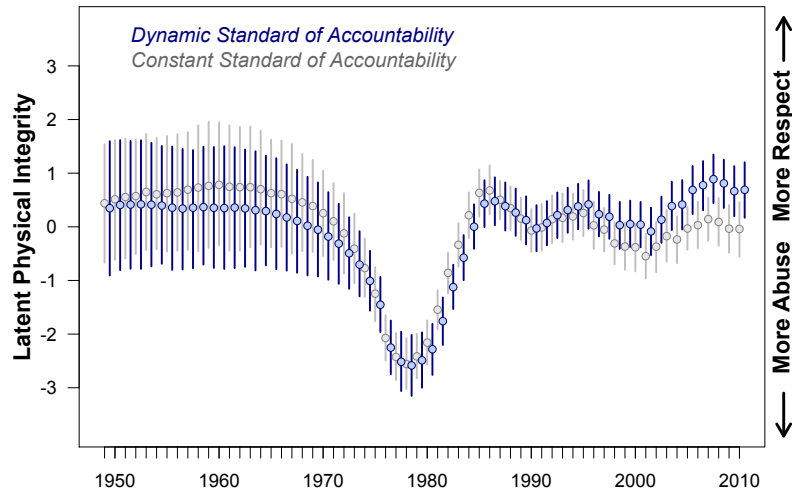
Figure 11: Yearly mean and credible intervals for latent physical integrity estimates from two models. The difference in the two sets of estimates suggests that an increasing standard of accountability explains why the average level of repression has remained unchanged over time when the changing standard is not taken into account. By allowing this standard to vary with time, a new picture emerges of improving physical integrity practices over time, which begins after initially deteriorating from the beginning of the period until the late 1970s. This figure is taken from (Fariss, 2014).

E Country Example Plots

Selected country-year posterior estimates and credible intervals (1949-2010). Coverage extends back to 1949 because of the incorporation of multiple indicators of physical integrity rights violations. More information is available about state behavior in the post 1975 period so the estimates are generally more precise from this period onwards. However, the level of precision (inverse variance) is quantified which makes possible probabilistic comparisons across the entire period. The model does a better job of discriminating among abusive states than with states that exhibit moderate to low abuse during the earlier period. Some of these figures are also presented in the supplementary appendix from (Fariss, 2014), which is available here:

http://cfariss.com/documents/Fariss2014APSR_SupplementaryAppendix.pdf.

Argentina



Guatemala

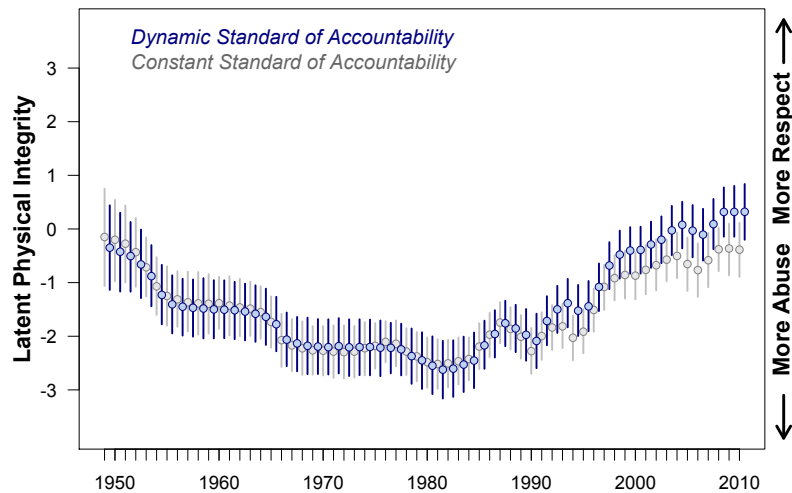


Figure 12: Selected country-year posterior estimates and credible intervals (1949-2010). Coverage extends back to 1949 because of the incorporation of multiple indicators of physical integrity rights violations. More information is available about state behavior in the post 1975 period so the estimates are generally more precise from this period onwards. However, the level of precision (inverse variance) is quantified which makes possible probabilistic comparisons across the entire period. The model does a better job of discriminating among abusive states than with states that exhibit moderate to low abuse during the earlier period. The grey estimates represent those taken from the constant standard model. The blue estimates represent those taken from the dynamic standard model. The dynamic standard model explicitly accounts for changes in the standard of accountability over time. The difference between the two series increases as a function of time.

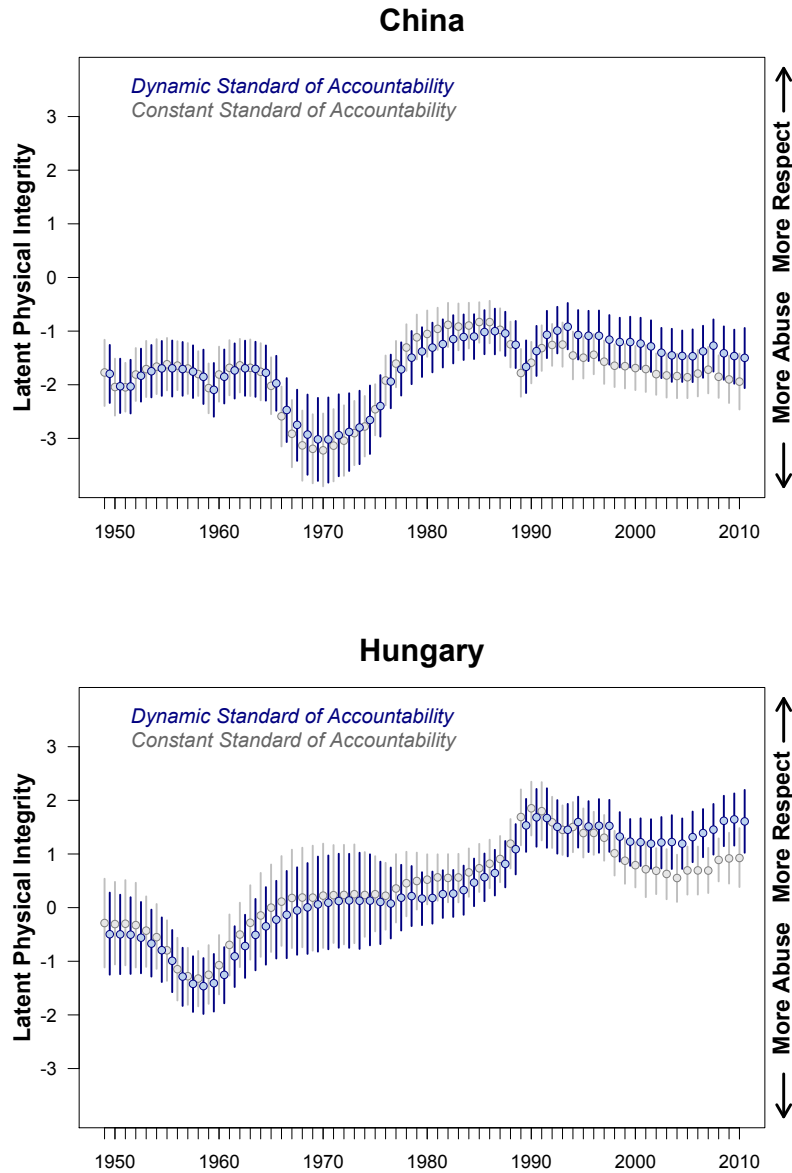
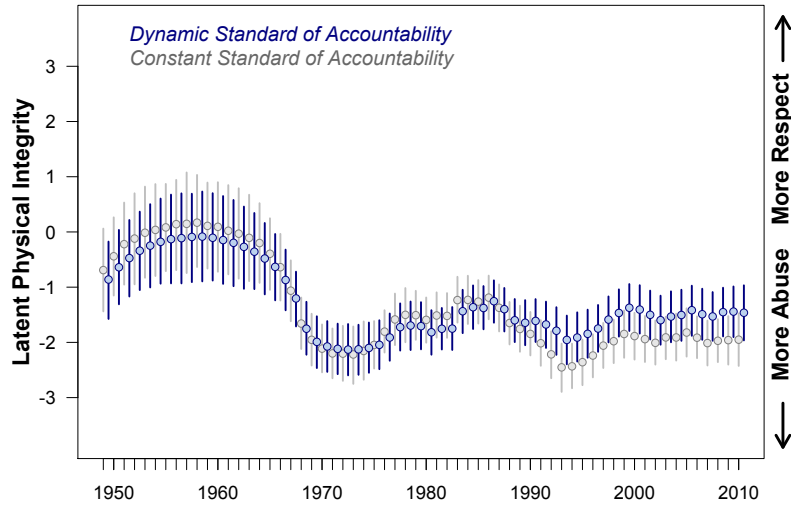


Figure 13: Selected country-year posterior estimates and credible intervals (1949-2010). The grey estimates represent those taken from the constant standard model. The blue estimates represent those taken from the dynamic standard model. The dynamic standard model explicitly accounts for changes in the standard of accountability over time. The difference between the two series increases as a function of time. In both of these cases, the models suggest that the 1980s and 2000s are about the same in terms of human rights respect in the constant standard model whereas the 2000s is on average better than the 1980s for these two countries.

India



Brazil

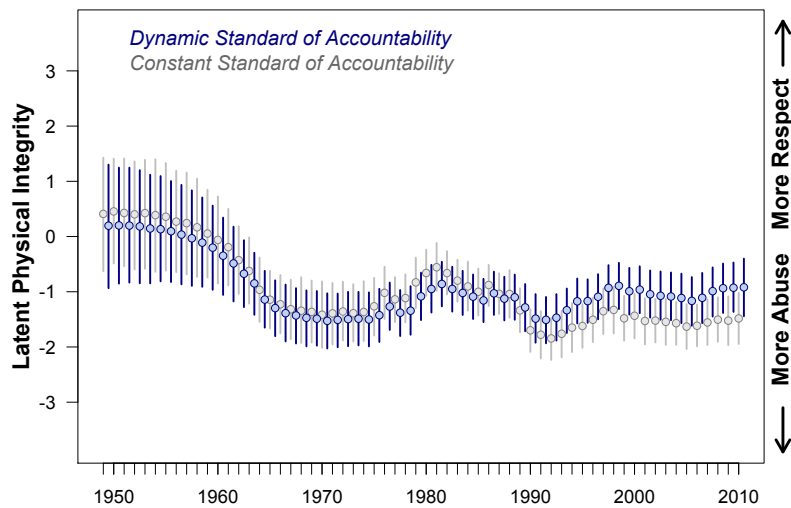
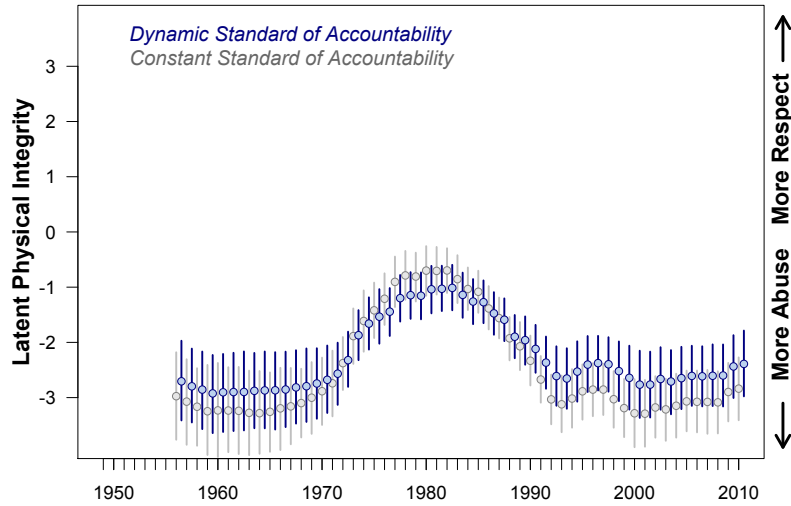


Figure 14: Selected country-year posterior estimates and credible intervals (1949-2010). The grey estimates represent those taken from the constant standard model. The blue estimates represent those taken from the dynamic standard model. The dynamic standard model explicitly accounts for changes in the standard of accountability over time. The difference between the two series increases as a function of time.

Sudan



El Salvador

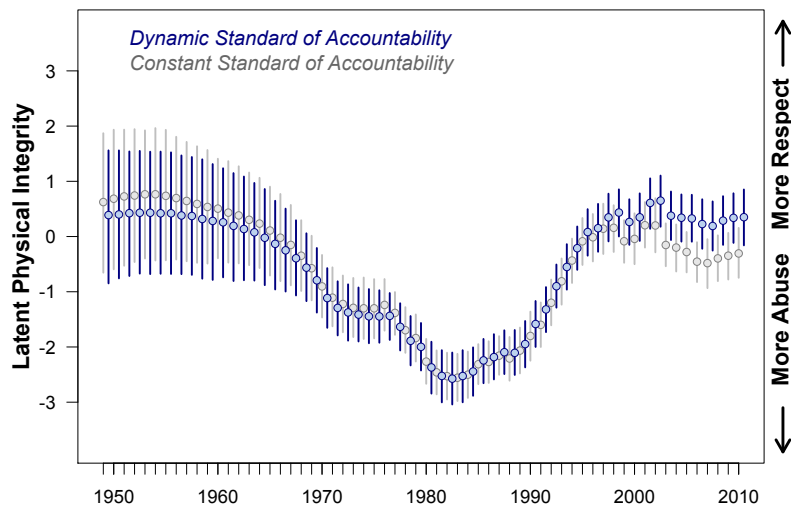
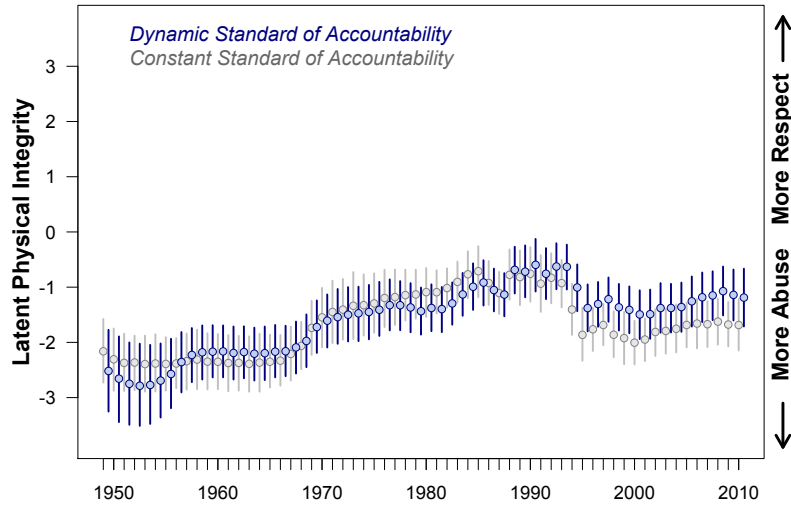


Figure 15: Selected country-year posterior estimates and credible intervals (1949-2010). The grey estimates represent those taken from the constant standard model. The blue estimates represent those taken from the dynamic standard model. The dynamic standard model explicitly accounts for changes in the standard of accountability over time. The difference between the two series increases as a function of time.

Russia/USSR



Cuba

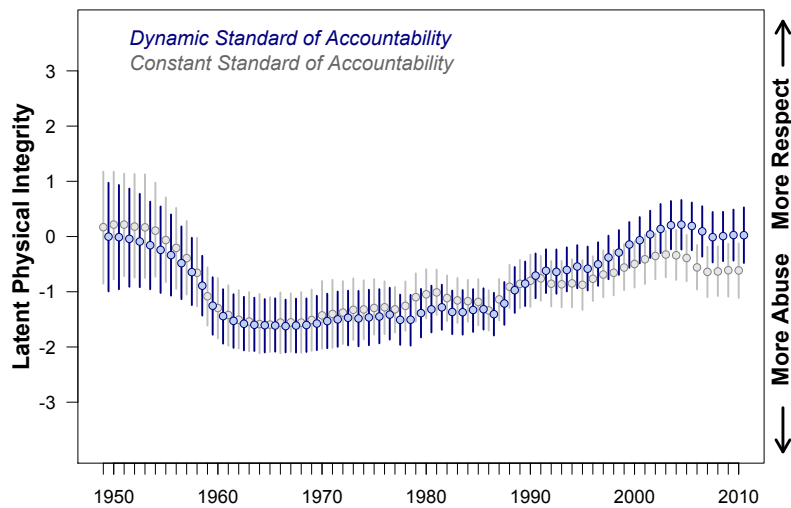


Figure 16: Selected country-year posterior estimates and credible intervals (1949-2010). The grey estimates represent those taken from the constant standard model. The blue estimates represent those taken from the dynamic standard model. The dynamic standard model explicitly accounts for changes in the standard of accountability over time. The difference between the two series increases as a function of time.

F Additional Information About the Results

Here I display tables of regression results for the main models presented visually in the manuscript. To reiterate the results from the main manuscript: even though the individual coefficients change depending on the model specification, the differences are consistent, which is a substantively important finding that eliminates concern that the use of a particular control variable is driving the results. And again, the results always contradict the negative findings from existing research. The coefficient for each of the various treaty variables flip signs in every model permutation presented across the figures.

One additional note of interest: I also use a method to incorporate uncertainty in the regression models and summarized visually in the figures. Specifically, [Schnakenberg and Fariss \(2014\)](#) describe a technique, which is designed to incorporate measurement uncertainty into any model that includes a latent variable on the right hand side of a regression equation. The procedure is to create m datasets, which can be as low as 5 or 10 ([Mislevy, 1991](#)). The datasets are constructed using different draws from the posterior distribution of the latent variable and then combined using the [Rubin \(1987\)](#) formulas, where the point estimate for each parameter is the mean from the m estimates, and the standard error is $\sqrt{\frac{1}{m} \sum_k s_k^2 + (1 + \frac{1}{m}) \sigma_\beta^2}$ where s_k^2 is the standard error from dataset k , and σ_β^2 is the variance in the regression coefficients between datasets. In words, the standard error is the average standard error from each model, plus the variance in the regression coefficients times a correction factor for $m < \infty$. This is the same procedure used for multiple imputation in the political science community ([King et al., 2001](#)). For an applied example and further discussion see [Crabtree and Fariss \(2015\)](#).

Table 4: Summary of Visual Displays of Regression Results for Nine Treaty Variables

	Human Rights Treaty Variable Description
Table 5	Latent Human Rights Treaty Variable
Table 6	Count of Selected Human Rights Treaties (CAT, CCPR, CESC, CERD, CEDAW, CRC)
Table 7	Count of All Human Rights Treaties (see Table 1 in main manuscript)
Table 8	Proportion of All Human Rights Treaties Available for Ratification in Year t (see Table 1 in main manuscript)
Table 9	Convention Against Torture (CAT)
Table 10	Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW)
Table 11	International Covenant on Civil and Political Rights (CCPR)
Table 12	International Covenant on Economic, Social, and Cultural Rights (CESC)
Table 13	International Convention on the Rights of the Child (CRC)
Table 14	International Convention on the Elimination of All Forms of Racial Discrimination (CERD)

Note: This list corresponds with a similar table in the main manuscript, which refers to figures that visually display the the treaty coefficients from the models displayed below. Each table displays linear regression coefficients for one of two dependent variables regressed on the selected treaty variable and controls. Each treaty variable is included in each of 8 model specifications described in the main manuscript. The difference between the treaty coefficients is similar across model specifications for all treaty variables. To reiterate the results from the main manuscript: even though the individual coefficients change depending on the model specification, the differences are consistent, which is a substantively important finding that eliminates concern that the use of a particular control variable is driving the results. And again, the results always contradict the negative findings from existing research. The coefficient for the each of the various treaty variables flip signs in every model permutation presented across the figures.

Table 5: Linear Regression of Two Latent Human Rights Variables on Latent Treaty Variable

Variable	Model 1a ^{Dynamic}		Model 2a ^{Dynamic}		Model 3a ^{Dynamic}		Model 4a ^{Dynamic}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	0.007 (0.006)	1.125	0.013 (0.006)	1.986	-0.366 (0.045)	-8.090	-0.064 (0.053)	-1.198
Latent Human Rights _{t-1}	0.930 (0.005)	185.952	0.913 (0.005)	171.654	0.895 (0.006)	158.713	0.870 (0.006)	140.351
Latent Treaty _{t-1}	0.015 (0.004)	3.703	0.002 (0.005)	0.520	0.002 (0.005)	0.489	0.007 (0.004)	1.582
Polity2 _{t-1}			0.008 (0.001)	8.189	0.006 (0.001)	6.554	0.008 (0.001)	8.897
$\ln(\text{gdppc}_{t-1})$					0.046 (0.005)	8.451	0.054 (0.005)	9.913
$\ln(\text{Population}_{t-1})$							-0.041 (0.004)	-10.482
Variable	Model 5a ^{Dynamic}		Model 6a ^{Dynamic}		Model 7a ^{Dynamic}		Model 8a ^{Dynamic}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.202 (0.052)	-3.906	-0.429 (0.046)	-9.381	0.225 (0.036)	6.291	0.331 (0.037)	8.908
Latent Human Rights _{t-1}	0.889 (0.006)	145.591	0.906 (0.006)	158.760	0.921 (0.005)	171.574	0.894 (0.006)	156.881
Latent Treaty _{t-1}	0.019 (0.004)	4.543	0.012 (0.004)	2.947	0.020 (0.004)	4.788	0.006 (0.004)	1.401
Polity2 _{t-1}							0.010 (0.001)	10.527
$\ln(\text{gdppc}_{t-1})$	0.061 (0.005)	11.153	0.053 (0.006)	9.638				
$\ln(\text{Population}_{t-1})$	-0.033 (0.004)	-8.208			-0.024 (0.004)	-6.172	-0.036 (0.004)	-8.753
Variable	Model 1a ^{Constant}		Model 2a ^{Constant}		Model 3a ^{Constant}		Model 4a ^{Constant}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.014 (0.006)	-2.167	-0.010 (0.007)	-1.505	-0.384 (0.045)	-8.509	-0.098 (0.054)	-1.816
Latent Human Rights _{t-1}	0.930 (0.005)	192.366	0.916 (0.005)	176.537	0.899 (0.005)	163.687	0.877 (0.006)	144.995
Latent Treaty _{t-1}	0.001 (0.004)	0.199	-0.013 (0.005)	-2.815	-0.015 (0.004)	-3.428	-0.014 (0.004)	-3.101
Polity2 _{t-1}			0.007 (0.001)	7.380	0.005 (0.001)	5.671	0.007 (0.001)	7.572
$\ln(\text{gdppc}_{t-1})$					0.045 (0.005)	8.393	0.053 (0.005)	9.699
$\ln(\text{Population}_{t-1})$							-0.039 (0.004)	-9.743
Variable	Model 5a ^{Constant}		Model 6a ^{Constant}		Model 7a ^{Constant}		Model 8a ^{Constant}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.222 (0.052)	-4.240	-0.442 (0.046)	-9.707	0.199 (0.036)	5.473	0.287 (0.037)	7.719
Latent Human Rights _{t-1}	0.890 (0.006)	153.920	0.907 (0.005)	166.373	0.920 (0.005)	174.518	0.899 (0.006)	161.919
Latent Treaty _{t-1}	-0.002 (0.004)	-0.396	-0.005 (0.004)	-1.334	0.005 (0.004)	1.127	-0.011 (0.004)	-2.613
Polity2 _{t-1}							0.009 (0.001)	9.196
$\ln(\text{gdppc}_{t-1})$	0.060 (0.005)	11.024	0.052 (0.005)	9.458				
$\ln(\text{Population}_{t-1})$	-0.032 (0.004)	-8.038			-0.024 (0.004)	-5.941	-0.033 (0.004)	-8.108

Table 6: Linear Regression of Two Latent Human Rights Variables on Count (Selected) Treaty Variable

Variable	Model 1b ^{Dynamic}		Model 2b ^{Dynamic}		Model 3b ^{Dynamic}		Model 4b ^{Dynamic}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.012 (0.010)	-1.179	0.009 (0.011)	0.845	-0.375 (0.047)	-7.988	-0.075 (0.054)	-1.405
Latent Human Rights _{t-1}	0.932 (0.005)	187.237	0.914 (0.005)	173.820	0.896 (0.006)	159.610	0.870 (0.006)	139.956
Latent Treaty _{t-1}	0.010 (0.003)	3.744	0.002 (0.003)	0.626	0.003 (0.003)	0.926	0.005 (0.003)	1.869
Polity2 _{t-1}			0.008 (0.001)	8.040	0.006 (0.001)	6.243	0.008 (0.001)	8.499
ln(gdppc _{t-1})					0.046 (0.006)	8.403	0.055 (0.005)	10.088
ln(Population _{t-1})							-0.042 (0.004)	-10.211
Variable	Model 5b ^{Dynamic}		Model 6b ^{Dynamic}		Model 7b ^{Dynamic}		Model 8b ^{Dynamic}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.231 (0.051)	-4.496	-0.451 (0.046)	-9.806	0.200 (0.036)	5.559	0.320 (0.037)	8.570
Latent Human Rights _{t-1}	0.889 (0.006)	149.907	0.906 (0.006)	162.099	0.922 (0.005)	175.910	0.895 (0.006)	160.481
Latent Treaty _{t-1}	0.013 (0.003)	5.045	0.009 (0.003)	3.494	0.013 (0.003)	5.019	0.004 (0.003)	1.404
Polity2 _{t-1}							0.010 (0.001)	10.183
ln(gdppc _{t-1})	0.062 (0.005)	11.372	0.053 (0.006)	9.697				
ln(Population _{t-1})	-0.034 (0.004)	-8.396			-0.025 (0.004)	-6.144	-0.035 (0.004)	-8.679
Variable	Model 1c ^{Constant}		Model 2c ^{Constant}		Model 3c ^{Constant}		Model 4c ^{Constant}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.006 (0.011)	-0.552	0.020 (0.010)	0.163	-0.355 (0.046)	-7.696	-0.065 (0.053)	-1.219
Latent Human Rights _{t-1}	0.930 (0.005)	186.974	0.912 (0.005)	176.661	0.895 (0.005)	163.100	0.872 (0.006)	145.250
Latent Treaty _{t-1}	-0.003 (0.001)	-1.101	-0.013 (0.003)	-4.749	-0.014 (0.003)	-5.089	-0.015 (0.003)	-5.245
Polity2 _{t-1}			0.008 (0.001)	8.087	0.006 (0.001)	6.434	0.008 (0.001)	8.451
ln(gdppc _{t-1})					0.046 (0.005)	8.415	0.054 (0.005)	9.906
ln(Population _{t-1})							-0.040 (0.004)	-9.991
Variable	Model 5c ^{Constant}		Model 6c ^{Constant}		Model 7c ^{Constant}		Model 8c ^{Constant}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.226 (0.052)	-4.343	-0.437 (0.046)	-9.558	0.197 (0.037)	5.382	0.322 (0.038)	8.390
Latent Human Rights _{t-1}	0.889 (0.006)	153.353	0.905 (0.005)	164.776	0.921 (0.005)	173.354	0.895 (0.006)	161.074
Latent Treaty _{t-1}	-0.005 (0.002)	-1.955	-0.007 (0.002)	-2.716	-0.001 (0.003)	-0.355	-0.013 (0.003)	-4.645
Polity2 _{t-1}							0.010 (0.001)	9.962
ln(gdppc _{t-1})	0.061 (0.006)	11.131	0.053 (0.006)	9.656				
ln(Population _{t-1})	-0.032 (0.004)	-7.925			-0.023 (0.004)	-5.717	-0.034 (0.004)	-8.254

Table 7: Linear Regression of Two Latent Human Rights Variables on Count (All) Treaty Variable

Variable	Model 1c ^{Dynamic}		Model 2c ^{Dynamic}		Model 3c ^{Dynamic}		Model 4c ^{Dynamic}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.016 (0.010)	-1.659	0.004 (0.010)	0.353	-0.372 (0.046)	-8.138	-0.070 (0.053)	-1.319
Latent Human Rights _{t-1}	0.929 (0.005)	179.964	0.913 (0.005)	173.999	0.896 (0.006)	156.341	0.870 (0.006)	139.756
Latent Treaty _{t-1}	0.006 (0.001)	4.668	0.002 (0.001)	1.396	0.002 (0.001)	1.146	0.003 (0.001)	2.420
Polity2 _{t-1}			0.007 (0.001)	7.629	0.006 (0.001)	6.172	0.008 (0.001)	8.373
ln(gdppc _{t-1})					0.046 (0.005)	8.419	0.054 (0.005)	9.903
ln(Population _{t-1})							-0.042 (0.004)	-10.551

Variable	Model 5c ^{Dynamic}		Model 6c ^{Dynamic}		Model 7c ^{Dynamic}		Model 8c ^{Dynamic}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.210 (0.052)	-4.061	-0.439 (0.045)	-9.725	0.211 (0.036)	5.887	0.323 (0.038)	8.574
Latent Human Rights _{t-1}	0.887 (0.006)	150.434	0.905 (0.006)	162.190	0.918 (0.005)	168.321	0.894 (0.006)	156.512
Latent Treaty _{t-1}	0.007 (0.001)	5.503	0.005 (0.001)	3.744	0.008 (0.001)	6.042	0.004 (0.001)	2.481
Polity2 _{t-1}							0.009 (0.001)	9.634
ln(gdppc _{t-1})	0.061 (0.005)	11.126	0.052 (0.005)	9.541				
ln(Population _{t-1})	-0.035 (0.004)	-8.659			-0.026 (0.004)	-6.511	-0.036 (0.004)	-8.827

Variable	Model 1a ^{Constant}		Model 2a ^{Constant}		Model 3a ^{Constant}		Model 4a ^{Constant}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.014 (0.009)	-1.477	0.009 (0.010)	0.854	-0.375 (0.046)	-8.155	-0.089 (0.053)	-1.684
Latent Human Rights _{t-1}	0.930 (0.005)	189.856	0.915 (0.005)	175.025	0.896 (0.006)	162.342	0.874 (0.006)	146.029
Latent Treaty _{t-1}	0.000 (0.001)	0.034	-0.005 (0.001)	-3.495	-0.006 (0.001)	-4.570	-0.006 (0.001)	-4.424
Polity2 _{t-1}			0.007 (0.001)	7.470	0.006 (0.001)	6.151	0.008 (0.001)	8.004
ln(gdppc _{t-1})					0.047 (0.006)	8.550	0.055 (0.005)	10.166
ln(Population _{t-1})							-0.039 (0.004)	-9.696

Variable	Model 5c ^{Constant}		Model 6c ^{Constant}		Model 7c ^{Constant}		Model 8c ^{Constant}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.228 (0.052)	-4.369	-0.441 (0.044)	-9.934	0.195 (0.037)	5.296	0.305 (0.038)	8.092
Latent Human Rights _{t-1}	0.890 (0.006)	155.987	0.906 (0.005)	171.300	0.920 (0.005)	171.513	0.897 (0.006)	160.622
Latent Treaty _{t-1}	-0.002 (0.001)	-1.192	-0.003 (0.001)	-2.177	0.001 (0.001)	1.021	-0.005 (0.001)	-3.278
Polity2 _{t-1}							0.009 (0.001)	9.506
ln(gdppc _{t-1})	0.061 (0.005)	11.261	0.053 (0.005)	9.812				
ln(Population _{t-1})	-0.032 (0.004)	-7.974			-0.024 (0.004)	-5.828	-0.033 (0.004)	-8.148

Table 8: Linear Regression of Two Latent Human Rights Variables on Proportion Treaty Variable

Variable	Model 1d ^{Dynamic}		Model 2d ^{Dynamic}		Model 3d ^{Dynamic}		Model 4d ^{Dynamic}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.014 (0.011)	-1.226	0.011 (0.011)	0.964	-0.365 (0.046)	-7.993	-0.067 (0.053)	-1.264
Latent Human Rights _{t-1}	0.931 (0.005)	183.980	0.914 (0.005)	172.590	0.896 (0.006)	160.721	0.870 (0.006)	137.507
Latent Treaty _{t-1}	0.077 (0.023)	3.263	0.008 (0.025)	0.299	-0.003 (0.025)	-0.113	0.028 (0.025)	1.134
Polity2 _{t-1}			0.008 (0.001)	8.381	0.006 (0.001)	6.857	0.009 (0.001)	9.105
$\ln(\text{gdppc}_{t-1})$					0.046 (0.005)	8.498	0.054 (0.006)	9.752
$\ln(\text{Population}_{t-1})$							-0.042 (0.004)	-10.189

Variable	Model 5d ^{Dynamic}		Model 6d ^{Dynamic}		Model 7d ^{Dynamic}		Model 8d ^{Dynamic}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.223 (0.052)	-4.325	-0.439 (0.046)	-9.632	0.199 (0.036)	5.595	0.322 (0.037)	8.715
Latent Human Rights _{t-1}	0.890 (0.006)	150.191	0.907 (0.006)	163.657	0.921 (0.005)	172.700	0.894 (0.006)	153.724
Latent Treaty _{t-1}	0.090 (0.024)	3.789	0.051 (0.024)	2.163	0.109 (0.024)	4.549	0.035 (0.025)	1.387
Polity2 _{t-1}							0.010 (0.001)	10.390
$\ln(\text{gdppc}_{t-1})$	0.061 (0.006)	10.956	0.053 (0.005)	9.645				
$\ln(\text{Population}_{t-1})$	-0.033 (0.004)	-8.158			-0.025 (0.004)	-6.223	-0.036 (0.004)	-8.809

Variable	Model 1d ^{Constant}		Model 2d ^{Constant}		Model 3d ^{Constant}		Model 4d ^{Constant}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.018 (0.011)	-1.632	0.005 (0.012)	0.432	-0.367 (0.047)	-7.826	-0.091 (0.054)	-1.683
Latent Human Rights _{t-1}	0.930 (0.005)	185.665	0.917 (0.005)	179.171	0.900 (0.006)	161.366	0.878 (0.006)	145.241
Latent Treaty _{t-1}	0.010 (0.023)	0.459	-0.058 (0.025)	-2.290	-0.076 (0.025)	-3.024	-0.057 (0.025)	-2.309
Polity2 _{t-1}			0.007 (0.001)	7.310	0.005 (0.001)	5.541	0.007 (0.001)	7.192
$\ln(\text{gdppc}_{t-1})$					0.046 (0.006)	8.208	0.053 (0.006)	9.541
$\ln(\text{Population}_{t-1})$							-0.038 (0.004)	-9.584

Variable	Model 5d ^{Constant}		Model 6d ^{Constant}		Model 7d ^{Constant}		Model 8d ^{Constant}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.218 (0.052)	-4.224	-0.435 (0.046)	-9.518	0.194 (0.036)	5.438	0.295 (0.037)	7.910
Latent Human Rights _{t-1}	0.890 (0.006)	150.291	0.907 (0.005)	169.963	0.920 (0.005)	170.571	0.900 (0.006)	161.180
Latent Treaty _{t-1}	0.000 (0.023)	0.014	-0.028 (0.023)	-1.226	0.036 (0.023)	1.529	-0.040 (0.025)	-1.614
Polity2 _{t-1}							0.008 (0.001)	8.983
$\ln(\text{gdppc}_{t-1})$	0.060 (0.005)	10.890	0.052 (0.006)	9.413				
$\ln(\text{Population}_{t-1})$	-0.033 (0.004)	-8.164			-0.025 (0.004)	-6.154	-0.033 (0.004)	-8.144

Table 9: Linear Regression of Two Latent Human Rights Variables on CAT Treaty Variable

Variable	Model 1e ^{Dynamic}		Model 2e ^{Dynamic}		Model 3e ^{Dynamic}		Model 4e ^{Dynamic}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	0.000 (0.007)	0.029	0.009 (0.008)	1.239	-0.367 (0.045)	-8.089	-0.060 (0.054)	-1.111
Latent Human Rights _{t-1}	0.931 (0.005)	182.974	0.913 (0.005)	176.584	0.896 (0.006)	161.063	0.870 (0.006)	141.133
Latent Treaty _{t-1}	0.050 (0.012)	4.086	0.015 (0.013)	1.113	0.008 (0.013)	0.575	0.025 (0.013)	1.939
Polity2 _{t-1}			0.008 (0.001)	8.257	0.006 (0.001)	6.684	0.008 (0.001)	9.020
ln(gdppc _{t-1})					0.046 (0.005)	8.402	0.054 (0.006)	9.740
ln(Population _{t-1})							-0.042 (0.004)	-10.156
Variable	Model 5e ^{Dynamic}		Model 6e ^{Dynamic}		Model 7e ^{Dynamic}		Model 8e ^{Dynamic}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.200 (0.052)	-3.807	-0.426 (0.046)	-9.339	0.224 (0.036)	6.127	0.328 (0.037)	8.803
Latent Human Rights _{t-1}	0.890 (0.006)	151.506	0.907 (0.005)	166.772	0.921 (0.005)	174.474	0.894 (0.006)	158.749
Latent Treaty _{t-1}	0.056 (0.012)	4.541	0.035 (0.012)	2.882	0.068 (0.013)	5.320	0.031 (0.013)	2.340
Polity2 _{t-1}							0.010 (0.001)	10.181
ln(gdppc _{t-1})	0.060 (0.006)	10.980	0.052 (0.006)	9.432				
ln(Population _{t-1})	-0.033 (0.004)	-8.207			-0.025 (0.004)	-6.232	-0.036 (0.004)	-8.691
Variable	Model 1e ^{Constant}		Model 2e ^{Constant}		Model 3e ^{Constant}		Model 4e ^{Constant}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.013 (0.007)	-1.785	-0.004 (0.007)	-0.498	-0.394 (0.046)	-8.560	-0.110 (0.054)	-2.055
Latent Human Rights _{t-1}	0.930 (0.005)	183.470	0.915 (0.005)	177.063	0.896 (0.006)	160.686	0.874 (0.006)	143.087
Latent Treaty _{t-1}	-0.002 (0.012)	-0.149	-0.044 (0.013)	-3.337	-0.060 (0.013)	-4.624	-0.057 (0.013)	-4.486
Polity2 _{t-1}			0.007 (0.001)	7.618	0.005 (0.001)	5.987	0.007 (0.001)	8.008
ln(gdppc _{t-1})					0.048 (0.006)	8.595	0.055 (0.005)	10.048
ln(Population _{t-1})							-0.039 (0.004)	-9.554
Variable	Model 5e ^{Constant}		Model 6e ^{Constant}		Model 7e ^{Constant}		Model 8e ^{Constant}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.235 (0.053)	-4.471	-0.452 (0.046)	-9.867	0.195 (0.036)	5.383	0.290 (0.037)	7.785
Latent Human Rights _{t-1}	0.889 (0.006)	150.259	0.905 (0.005)	165.412	0.921 (0.005)	174.532	0.898 (0.006)	157.496
Latent Treaty _{t-1}	-0.020 (0.012)	-1.635	-0.031 (0.012)	-2.631	0.010 (0.012)	0.821	-0.038 (0.013)	-2.936
Polity2 _{t-1}							0.009 (0.001)	9.397
ln(gdppc _{t-1})	0.062 (0.006)	11.069	0.054 (0.006)	9.726				
ln(Population _{t-1})	-0.032 (0.004)	-7.991			-0.024 (0.004)	-5.845	-0.033 (0.004)	-8.014

Table 10: Linear Regression of Two Latent Human Rights Variables on CEDAW Treaty Variable

Variable	Model 1f ^{Dynamic}		Model 2f ^{Dynamic}		Model 3f ^{Dynamic}		Model 4f ^{Dynamic}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	0.006 (0.010)	0.602	0.017 (0.010)	1.782	-0.297 (0.054)	-5.498	-0.056 (0.063)	-0.893
Latent Human Rights _{t-1}	0.949 (0.005)	175.766	0.934 (0.006)	160.525	0.921 (0.006)	147.187	0.901 (0.007)	135.320
Latent Treaty _{t-1}	0.027 (0.013)	2.121	0.002 (0.013)	0.190	0.010 (0.013)	0.756	0.014 (0.013)	1.100
Polity2 _{t-1}			0.006 (0.001)	6.371	0.005 (0.001)	4.651	0.007 (0.001)	6.433
ln(gdppc _{t-1})					0.038 (0.006)	5.960	0.043 (0.006)	6.829
ln(Population _{t-1})							-0.032 (0.004)	-7.423
Variable	Model 5f ^{Dynamic}		Model 6f ^{Dynamic}		Model 7f ^{Dynamic}		Model 8f ^{Dynamic}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.210 (0.058)	-3.591	-0.371 (0.051)	-7.212	0.165 (0.038)	4.386	0.270 (0.039)	6.851
Latent Human Rights _{t-1}	0.916 (0.006)	142.950	0.928 (0.006)	153.220	0.943 (0.006)	165.220	0.918 (0.006)	145.069
Latent Treaty _{t-1}	0.038 (0.013)	3.013	0.029 (0.013)	2.273	0.033 (0.013)	2.634	0.005 (0.013)	0.365
Polity2 _{t-1}							0.008 (0.001)	8.112
ln(gdppc _{t-1})	0.052 (0.006)	8.498	0.045 (0.006)	7.450				
ln(Population _{t-1})	-0.025 (0.004)	-5.976			-0.018 (0.004)	-4.353	-0.028 (0.004)	-6.603
Variable	Model 1f ^{Constant}		Model 2f ^{Constant}		Model 3f ^{Constant}		Model 4f ^{Constant}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.012 (0.009)	-1.266	0.000 (0.009)	-0.026	-0.291 (0.053)	-5.459	-0.064 (0.063)	-1.019
Latent Human Rights _{t-1}	0.946 (0.005)	177.501	0.932 (0.006)	167.322	0.921 (0.006)	149.647	0.903 (0.007)	138.920
Latent Treaty _{t-1}	-0.009 (0.012)	-0.746	-0.037 (0.013)	-2.843	-0.034 (0.013)	-2.554	-0.036 (0.013)	-2.777
Polity2 _{t-1}			0.006 (0.001)	6.045	0.004 (0.001)	4.146	0.006 (0.001)	5.878
ln(gdppc _{t-1})					0.035 (0.006)	5.565	0.040 (0.006)	6.246
ln(Population _{t-1})							-0.030 (0.004)	-6.920
Variable	Model 5f ^{Constant}		Model 6f ^{Constant}		Model 7f ^{Constant}		Model 8f ^{Constant}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.208 (0.057)	-3.623	-0.363 (0.051)	-7.153	0.142 (0.038)	3.723	0.239 (0.039)	6.102
Latent Human Rights _{t-1}	0.915 (0.006)	148.134	0.927 (0.006)	158.412	0.939 (0.006)	168.036	0.918 (0.006)	149.374
Latent Treaty _{t-1}	-0.010 (0.012)	-0.874	-0.015 (0.012)	-1.218	-0.006 (0.012)	-0.487	-0.039 (0.013)	-3.031
Polity2 _{t-1}							0.007 (0.001)	7.597
ln(gdppc _{t-1})	0.049 (0.006)	7.992	0.043 (0.006)	7.064				
ln(Population _{t-1})	-0.023 (0.004)	-5.751			-0.017 (0.004)	-4.140	-0.027 (0.004)	-6.311

Table 11: Linear Regression of Two Latent Human Rights Variables on CCPR Treaty Variable

Variable	Model 1g ^{Dynamic}		Model 2g ^{Dynamic}		Model 3g ^{Dynamic}		Model 4g ^{Dynamic}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	0.000 (0.009)	-0.037	0.017 (0.009)	1.869	-0.363 (0.046)	-7.865	-0.066 (0.054)	-1.235
Latent Human Rights _{t-1}	0.933 (0.005)	188.756	0.914 (0.005)	172.262	0.895 (0.006)	156.274	0.871 (0.006)	144.031
Latent Treaty _{t-1}	0.031 (0.012)	2.639	-0.006 (0.013)	-0.505	-0.005 (0.013)	-0.430	0.004 (0.013)	0.343
Polity2 _{t-1}			0.008 (0.001)	8.574	0.007 (0.001)	6.917	0.009 (0.001)	9.453
ln(gdppc _{t-1})					0.046 (0.005)	8.432	0.054 (0.005)	9.872
ln(Population _{t-1})							-0.041 (0.004)	-10.333
Variable	Model 5g ^{Dynamic}		Model 6g ^{Dynamic}		Model 7g ^{Dynamic}		Model 8g ^{Dynamic}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.230 (0.052)	-4.421	-0.437 (0.046)	-9.567	0.202 (0.036)	5.566	0.328 (0.037)	8.874
Latent Human Rights _{t-1}	0.892 (0.006)	154.219	0.908 (0.005)	165.638	0.924 (0.005)	178.317	0.895 (0.006)	158.873
Latent Treaty _{t-1}	0.040 (0.012)	3.379	0.024 (0.012)	2.066	0.043 (0.012)	3.638	0.001 (0.012)	0.104
Polity2 _{t-1}							0.010 (0.001)	10.739
ln(gdppc _{t-1})	0.062 (0.006)	11.202	0.053 (0.005)	9.757				
ln(Population _{t-1})	-0.032 (0.004)	-7.896			-0.023 (0.004)	-5.775	-0.035 (0.004)	-8.638
Variable	Model 1g ^{Constant}		Model 2g ^{Constant}		Model 3g ^{Constant}		Model 4g ^{Constant}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.008 (0.009)	-0.870	0.009 (0.009)	1.040	-0.364 (0.047)	-7.802	-0.077 (0.054)	-1.440
Latent Human Rights _{t-1}	0.930 (0.005)	185.888	0.914 (0.005)	175.202	0.897 (0.006)	160.963	0.874 (0.006)	146.718
Latent Treaty _{t-1}	-0.011 (0.012)	-0.918	-0.051 (0.013)	-4.031	-0.056 (0.013)	-4.377	-0.054 (0.012)	-4.357
Polity2 _{t-1}			0.007 (0.001)	7.855	0.006 (0.001)	5.941	0.007 (0.001)	8.092
ln(gdppc _{t-1})					0.045 (0.006)	8.209	0.053 (0.005)	9.626
ln(Population _{t-1})							-0.039 (0.004)	-9.820
Variable	Model 5g ^{Constant}		Model 6g ^{Constant}		Model 7g ^{Constant}		Model 8g ^{Constant}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.222 (0.050)	-4.393	-0.437 (0.045)	-9.716	0.196 (0.037)	5.349	0.307 (0.038)	8.151
Latent Human Rights _{t-1}	0.890 (0.006)	152.825	0.906 (0.005)	167.731	0.921 (0.005)	172.906	0.897 (0.006)	162.079
Latent Treaty _{t-1}	-0.018 (0.012)	-1.551	-0.027 (0.012)	-2.345	-0.002 (0.012)	-0.180	-0.049 (0.013)	-3.809
Polity2 _{t-1}							0.009 (0.001)	9.564
ln(gdppc _{t-1})	0.061 (0.005)	11.362	0.053 (0.005)	9.702				
ln(Population _{t-1})	-0.032 (0.004)	-8.056			-0.023 (0.004)	-5.741	-0.033 (0.004)	-8.209

Table 12: Linear Regression of Two Latent Human Rights Variables on CЕСSR Treaty Variable

Variable	Model 1h ^{Dynamic}		Model 2h ^{Dynamic}		Model 3h ^{Dynamic}		Model 4h ^{Dynamic}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.002 (0.012)	-0.173	0.016 (0.013)	1.217	-0.364 (0.066)	-5.552	-0.066 (0.077)	-0.852
Latent Human Rights _{t-1}	0.932 (0.007)	133.250	0.914 (0.008)	121.629	0.896 (0.008)	113.077	0.871 (0.009)	97.753
Latent Treaty _{t-1}	0.035 (0.017)	2.101	-0.004 (0.018)	-0.203	-0.002 (0.018)	-0.107	0.002 (0.018)	0.124
Polity2 _{t-1}			0.008 (0.001)	5.982	0.006 (0.001)	4.757	0.009 (0.001)	6.440
ln(gdppc _{t-1})					0.046 (0.008)	5.911	0.054 (0.008)	6.987
ln(Population _{t-1})							-0.041 (0.006)	-7.121
Variable	Model 5h ^{Dynamic}		Model 6h ^{Dynamic}		Model 7h ^{Dynamic}		Model 8h ^{Dynamic}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.232 (0.074)	-3.120	-0.438 (0.063)	-6.900	0.197 (0.050)	3.925	0.327 (0.054)	6.106
Latent Human Rights _{t-1}	0.892 (0.008)	106.623	0.907 (0.008)	117.277	0.924 (0.007)	125.892	0.895 (0.008)	109.501
Latent Treaty _{t-1}	0.040 (0.017)	2.414	0.028 (0.016)	1.748	0.044 (0.017)	2.620	0.000 (0.018)	-0.005
Polity2 _{t-1}							0.010 (0.001)	7.397
ln(gdppc _{t-1})	0.062 (0.008)	8.000	0.053 (0.008)	7.000				
ln(Population _{t-1})	-0.031 (0.006)	-5.568			-0.023 (0.006)	-4.063	-0.035 (0.006)	-6.053
Variable	Model 1h ^{Constant}		Model 2h ^{Constant}		Model 3h ^{Constant}		Model 4h ^{Constant}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.010 (0.012)	-0.823	0.006 (0.013)	0.485	-0.364 (0.066)	-5.525	-0.072 (0.078)	-0.931
Latent Human Rights _{t-1}	0.930 (0.007)	134.425	0.914 (0.007)	124.630	0.898 (0.008)	113.931	0.874 (0.009)	100.494
Latent Treaty _{t-1}	-0.006 (0.016)	-0.400	-0.046 (0.018)	-2.557	-0.050 (0.018)	-2.772	-0.053 (0.018)	-2.921
Polity2 _{t-1}			0.007 (0.001)	5.450	0.005 (0.001)	4.176	0.008 (0.001)	5.521
ln(gdppc _{t-1})					0.045 (0.008)	5.781	0.053 (0.008)	6.813
ln(Population _{t-1})							-0.040 (0.006)	-6.691
Variable	Model 5h ^{Constant}		Model 6h ^{Constant}		Model 7h ^{Constant}		Model 8h ^{Constant}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.220 (0.074)	-2.975	-0.437 (0.063)	-6.951	0.196 (0.051)	3.848	0.312 (0.053)	5.849
Latent Human Rights _{t-1}	0.890 (0.008)	105.083	0.906 (0.008)	116.929	0.921 (0.008)	122.585	0.897 (0.008)	111.226
Latent Treaty _{t-1}	-0.015 (0.016)	-0.904	-0.021 (0.017)	-1.295	0.000 (0.016)	0.021	-0.049 (0.018)	-2.681
Polity2 _{t-1}							0.009 (0.001)	6.991
ln(gdppc _{t-1})	0.061 (0.008)	7.753	0.052 (0.008)	6.941				
ln(Population _{t-1})	-0.032 (0.006)	-5.656			-0.023 (0.006)	-4.173	-0.034 (0.006)	-5.886

Table 13: Linear Regression of Two Latent Human Rights Variables on CRC Treaty Variable

Variable	Model 1i ^{Dynamic}		Model 2i ^{Dynamic}		Model 3i ^{Dynamic}		Model 4i ^{Dynamic}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.004 (0.008)	-0.465	0.005 (0.008)	0.662	-0.384 (0.048)	-8.026	-0.082 (0.053)	-1.537
Latent Human Rights _{t-1}	0.932 (0.005)	186.971	0.914 (0.005)	177.202	0.895 (0.006)	156.655	0.870 (0.006)	142.356
Latent Treaty _{t-1}	0.047 (0.012)	3.939	0.020 (0.012)	1.686	0.028 (0.012)	2.275	0.036 (0.012)	2.991
Polity2 _{t-1}			0.007 (0.001)	8.305	0.006 (0.001)	6.352	0.008 (0.001)	8.773
ln(gdppc _{t-1})					0.047 (0.006)	8.351	0.055 (0.005)	10.296
ln(Population _{t-1})							-0.042 (0.004)	-10.403
Variable	Model 5i ^{Dynamic}		Model 6i ^{Dynamic}		Model 7i ^{Dynamic}		Model 8i ^{Dynamic}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.246 (0.053)	-4.678	-0.456 (0.046)	-10.002	0.198 (0.036)	5.499	0.321 (0.038)	8.530
Latent Human Rights _{t-1}	0.889 (0.006)	151.800	0.906 (0.006)	164.337	0.924 (0.005)	176.591	0.895 (0.006)	155.198
Latent Treaty _{t-1}	0.062 (0.012)	5.392	0.049 (0.012)	4.238	0.055 (0.012)	4.657	0.026 (0.012)	2.122
Polity2 _{t-1}							0.010 (0.001)	10.622
ln(gdppc _{t-1})	0.064 (0.005)	11.648	0.055 (0.005)	10.073				
ln(Population _{t-1})	-0.032 (0.004)	-8.107			-0.023 (0.004)	-5.762	-0.035 (0.004)	-8.660
Variable	Model 1i ^{Constant}		Model 2i ^{Constant}		Model 3i ^{Constant}		Model 4i ^{Constant}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.007 (0.008)	-0.898	0.004 (0.008)	0.489	-0.368 (0.046)	-7.994	-0.067 (0.054)	-1.251
Latent Human Rights _{t-1}	0.929 (0.005)	185.021	0.913 (0.005)	173.989	0.896 (0.006)	160.712	0.871 (0.006)	140.912
Latent Treaty _{t-1}	-0.015 (0.011)	-1.327	-0.050 (0.012)	-4.164	-0.053 (0.012)	-4.402	-0.062 (0.012)	-5.229
Polity2 _{t-1}			0.007 (0.001)	7.955	0.005 (0.001)	5.743	0.008 (0.001)	8.324
ln(gdppc _{t-1})					0.045 (0.005)	8.193	0.053 (0.005)	9.655
ln(Population _{t-1})							-0.041 (0.004)	-10.034
Variable	Model 5i ^{Constant}		Model 6i ^{Constant}		Model 7i ^{Constant}		Model 8i ^{Constant}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.221 (0.051)	-4.350	-0.437 (0.045)	-9.703	0.199 (0.037)	5.380	0.318 (0.037)	8.515
Latent Human Rights _{t-1}	0.888 (0.006)	150.081	0.905 (0.005)	165.101	0.920 (0.005)	175.160	0.894 (0.006)	161.439
Latent Treaty _{t-1}	-0.026 (0.011)	-2.400	-0.028 (0.011)	-2.536	-0.011 (0.011)	-0.948	-0.057 (0.012)	-4.735
Polity2 _{t-1}							0.009 (0.001)	9.999
ln(gdppc _{t-1})	0.061 (0.005)	11.437	0.052 (0.005)	9.722				
ln(Population _{t-1})	-0.032 (0.004)	-8.136			-0.023 (0.004)	-5.741	-0.035 (0.004)	-8.646

Table 14: Linear Regression of Two Latent Human Rights Variables on CERD Treaty Variable

Variable	Model 1j ^{Dynamic}		Model 2j ^{Dynamic}		Model 3j ^{Dynamic}		Model 4j ^{Dynamic}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	0.003 (0.010)	0.256	0.014 (0.010)	1.310	-0.367 (0.048)	-7.674	-0.074 (0.055)	-1.346
Latent Human Rights _{t-1}	0.934 (0.005)	192.035	0.914 (0.005)	173.280	0.896 (0.006)	157.822	0.870 (0.006)	143.498
Latent Treaty _{t-1}	0.020 (0.013)	1.600	0.001 (0.013)	0.064	0.004 (0.012)	0.302	0.017 (0.012)	1.370
Polity2 _{t-1}			0.008 (0.001)	8.864	0.006 (0.001)	7.078	0.009 (0.001)	9.783
ln(gdppc _{t-1})					0.046 (0.006)	8.192	0.054 (0.005)	9.916
ln(Population _{t-1})							-0.041 (0.004)	-10.137
Variable	Model 5j ^{Dynamic}		Model 6j ^{Dynamic}		Model 7j ^{Dynamic}		Model 8j ^{Dynamic}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.241 (0.053)	-4.518	-0.442 (0.047)	-9.475	0.194 (0.036)	5.318	0.324 (0.037)	8.651
Latent Human Rights _{t-1}	0.892 (0.006)	154.826	0.908 (0.006)	165.040	0.926 (0.005)	178.801	0.895 (0.006)	159.273
Latent Treaty _{t-1}	0.033 (0.012)	2.661	0.019 (0.012)	1.509	0.029 (0.013)	2.290	0.012 (0.012)	0.962
Polity2 _{t-1}							0.010 (0.001)	11.178
ln(gdppc _{t-1})	0.063 (0.006)	11.366	0.054 (0.006)	9.806				
ln(Population _{t-1})	-0.031 (0.004)	-7.943			-0.022 (0.004)	-5.410	-0.035 (0.004)	-8.637
Variable	Model 1j ^{Constant}		Model 2j ^{Constant}		Model 3j ^{Constant}		Model 4j ^{Constant}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.006 (0.010)	-0.611	0.003 (0.010)	0.247	-0.364 (0.047)	-7.809	-0.086 (0.054)	-1.597
Latent Human Rights _{t-1}	0.930 (0.005)	190.684	0.917 (0.005)	176.465	0.900 (0.006)	161.119	0.878 (0.006)	148.182
Latent Treaty _{t-1}	-0.012 (0.012)	-0.935	-0.031 (0.013)	-2.453	-0.032 (0.013)	-2.535	-0.026 (0.012)	-2.057
Polity2 _{t-1}			0.006 (0.001)	7.315	0.004 (0.001)	5.183	0.006 (0.001)	7.258
ln(gdppc _{t-1})					0.044 (0.005)	8.115	0.052 (0.005)	9.616
ln(Population _{t-1})							-0.039 (0.004)	-9.473
Variable	Model 5j ^{Constant}		Model 6j ^{Constant}		Model 7j ^{Constant}		Model 8j ^{Constant}	
	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z	β (s.e.)	Z
Intercept	-0.217 (0.053)	-4.137	-0.428 (0.046)	-9.296	0.196 (0.037)	5.312	0.297 (0.037)	7.990
Latent Human Rights _{t-1}	0.890 (0.006)	151.215	0.907 (0.005)	167.020	0.921 (0.005)	173.972	0.900 (0.006)	161.934
Latent Treaty _{t-1}	-0.010 (0.012)	-0.788	-0.020 (0.012)	-1.638	-0.003 (0.012)	-0.277	-0.026 (0.013)	-2.049
Polity2 _{t-1}							0.008 (0.001)	9.179
ln(gdppc _{t-1})	0.060 (0.005)	10.967	0.051 (0.005)	9.527				
ln(Population _{t-1})	-0.032 (0.004)	-8.023			-0.023 (0.004)	-5.666	-0.033 (0.004)	-8.176

G Graphical Comparisons of the Latent Human Rights Variable and the Constituent Human Rights Indicators

The following set of figures display the distribution of country-year units across values of the latent human rights variable for each value of the thirteen categorical human rights indicators included in the latent variable described in [Fariss \(2014\)](#). Statistical analyses of the relationship between the latent variable and the indicators are described in detail in the Supplementary Appendix that accompanies the article by [Fariss \(2014\)](#). These graphical displays provide visual evidence that corroborates the statistical analyses: the latent human rights variable and the individual categorical human rights variables are strongly related to one another. That is, the latent human rights variable — an estimate based on the constellation of all thirteen human rights indicators — is able to differentiate between the values of each of these individual variables. To reiterate a point made in the main article, latent variable models, with their focus on the theoretical relationship between data and model parameters, offer a principled way to bring together different pieces of information even if that information is biased in some way. These figures offer a visual method of inspecting the relationship between the values of the latent variable and the values of the categorical indicators included in the latent human rights model developed by [Fariss \(2014\)](#).

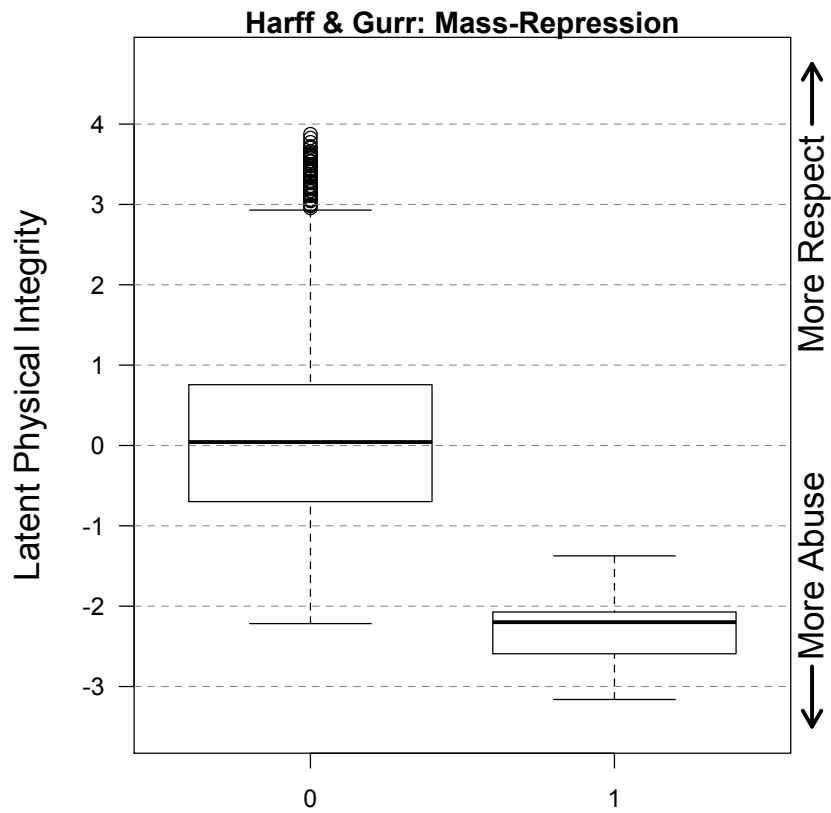


Figure 17: Distribution of country-year units across values of the latent human rights variable from Fariss (2014), for each value from the categorical human rights indicator. A 1 indicates that the described event occurred in the country-year and 0 indicates that it did not. More information about the operationalization of the human rights variables are above. This figure offers a visual method of inspecting the relationship between the values of the latent variable and the values of the categorical indicator, which is included in the latent human rights model developed by Fariss (2014).

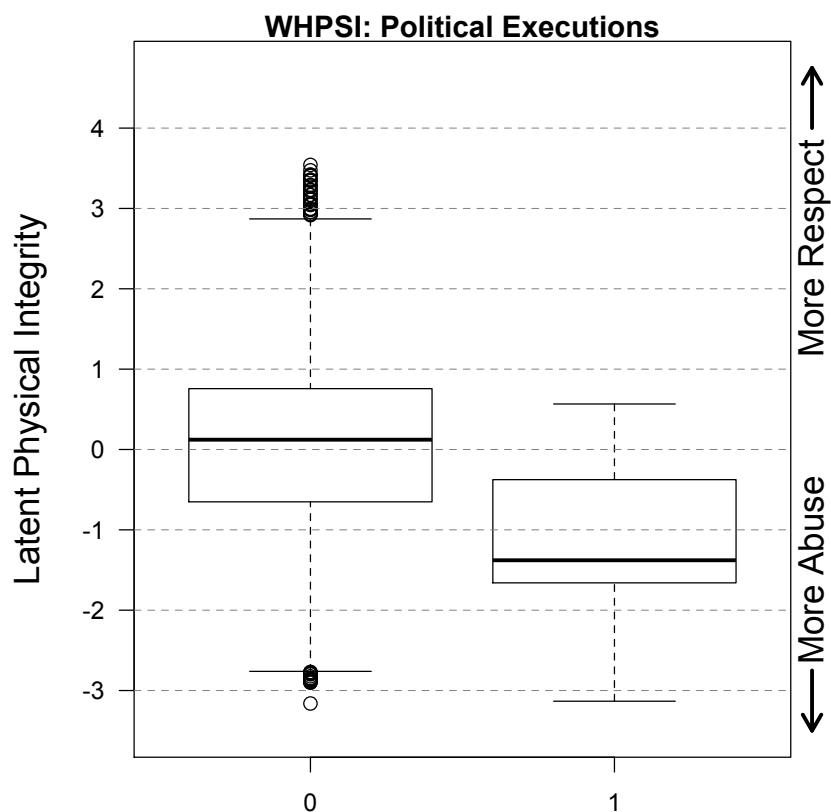


Figure 18: Distribution of country-year units across values of the latent human rights variable from Fariss (2014), for each value from the categorical human rights indicator. A 1 indicates that the described event occurred in the country-year and 0 indicates that it did not. More information about the operationalization of the human rights variables are above. This figure offers a visual method of inspecting the relationship between the values of the latent variable and the values of the categorical indicator, which is included in the latent human rights model developed by Fariss (2014).

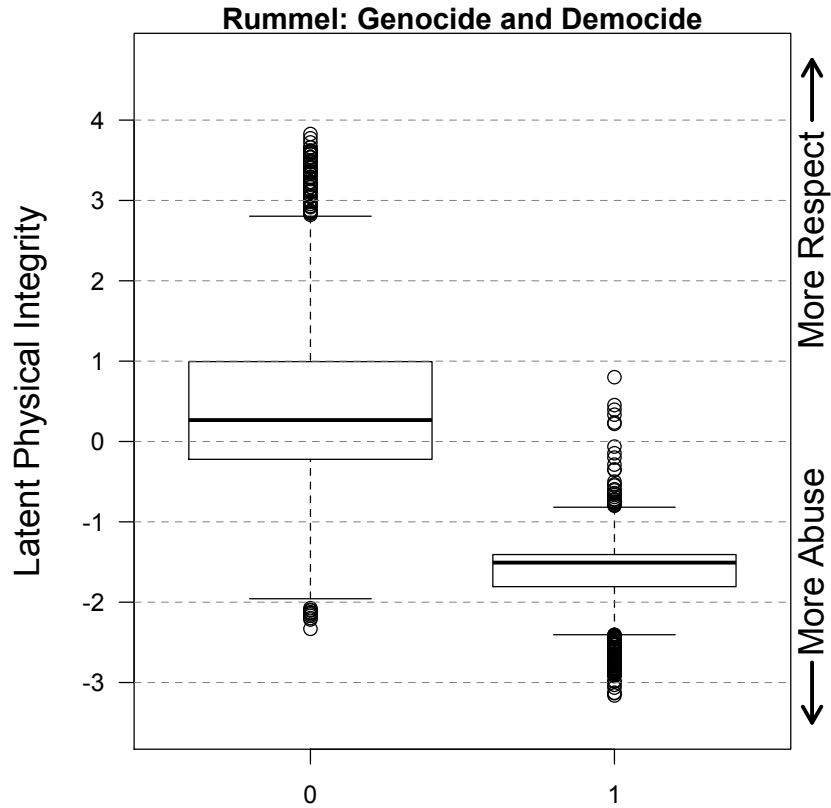


Figure 19: Distribution of country-year units across values of the latent human rights variable from Fariss (2014), for each value from the categorical human rights indicator. A 1 indicates that the described event occurred in the country-year and 0 indicates that it did not. More information about the operationalization of the human rights variables are above. This figure offers a visual method of inspecting the relationship between the values of the latent variable and the values of the categorical indicator, which is included in the latent human rights model developed by Fariss (2014).

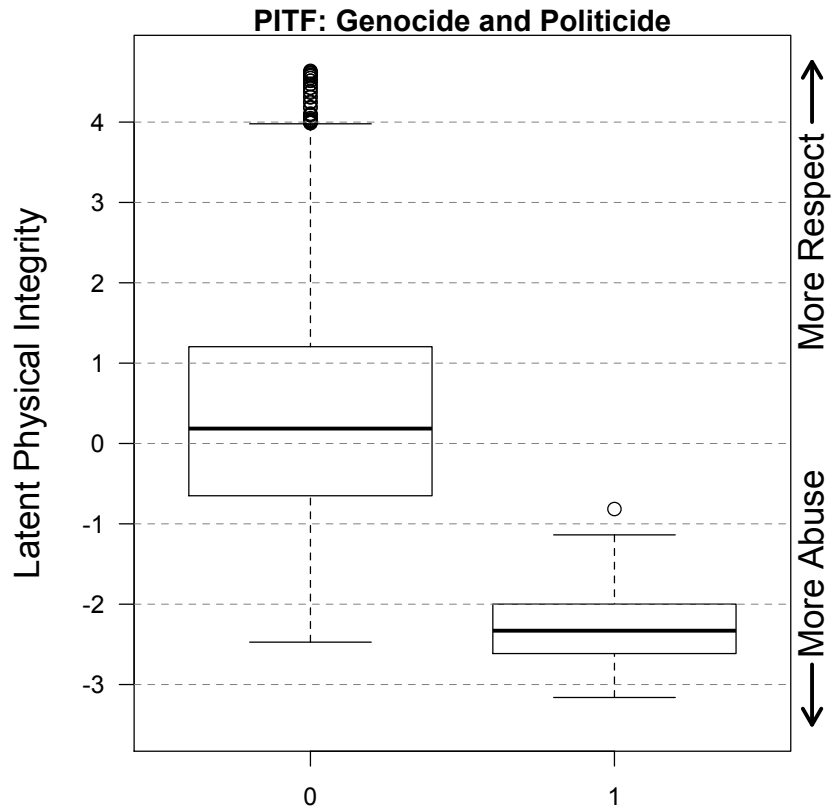


Figure 20: Distribution of country-year units across values of the latent human rights variable from Fariss (2014), for each value from the categorical human rights indicator. A 1 indicates that the described event occurred in the country-year and 0 indicates that it did not. More information about the operationalization of the human rights variables are above. This figure offers a visual method of inspecting the relationship between the values of the latent variable and the values of the categorical indicator, which is included in the latent human rights model developed by Fariss (2014).

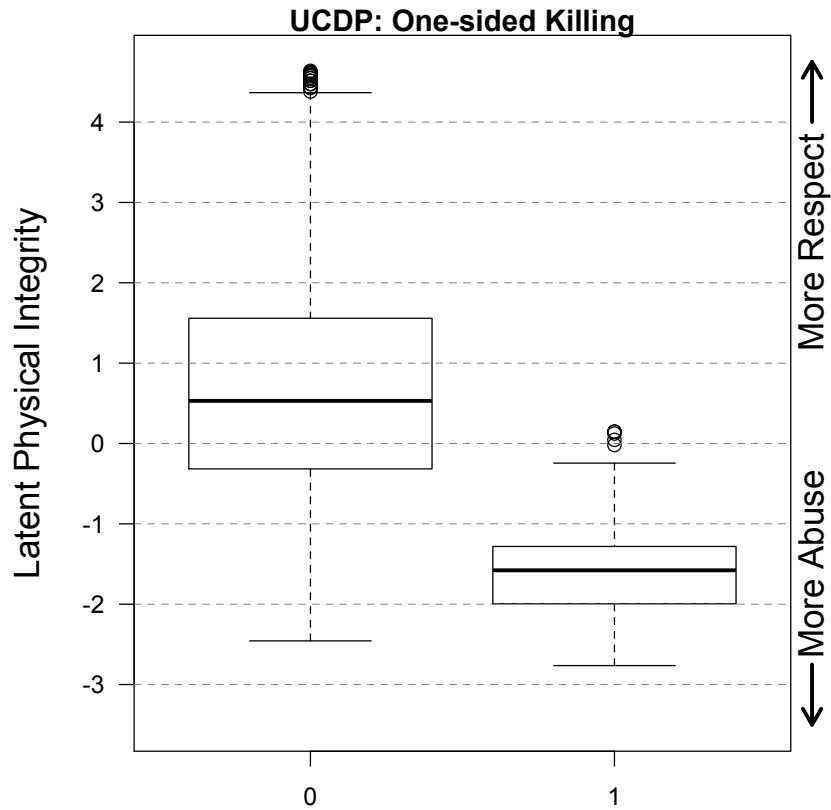


Figure 21: Distribution of country-year units across values of the latent human rights variable from Fariss (2014), for each value from the categorical human rights indicator. A 1 indicates that the described event occurred in the country-year and 0 indicates that it did not. More information about the operationalization of the human rights variables are above. This figure offers a visual method of inspecting the relationship between the values of the latent variable and the values of the categorical indicator, which is included in the latent human rights model developed by Fariss (2014).

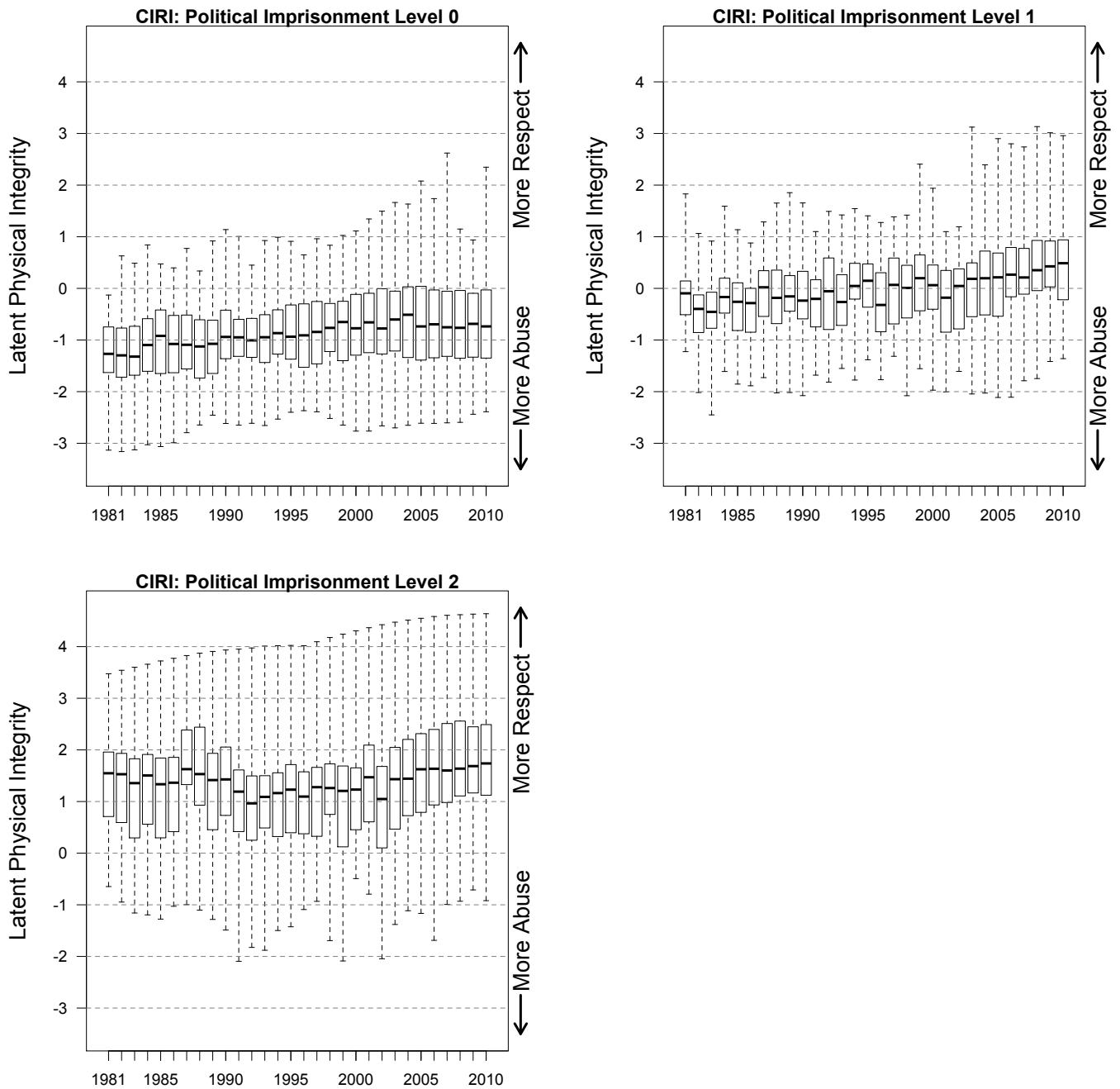


Figure 22: Distribution of country-year units across values of the latent human rights variable from Fariss (2014), for each value from the categorical human rights indicator. More information about the operationalization of the human rights variables are above. This figure offers a visual method of inspecting the relationship between the values of the latent variable and the values of the categorical indicator, which is included in the latent human rights model developed by Fariss (2014).

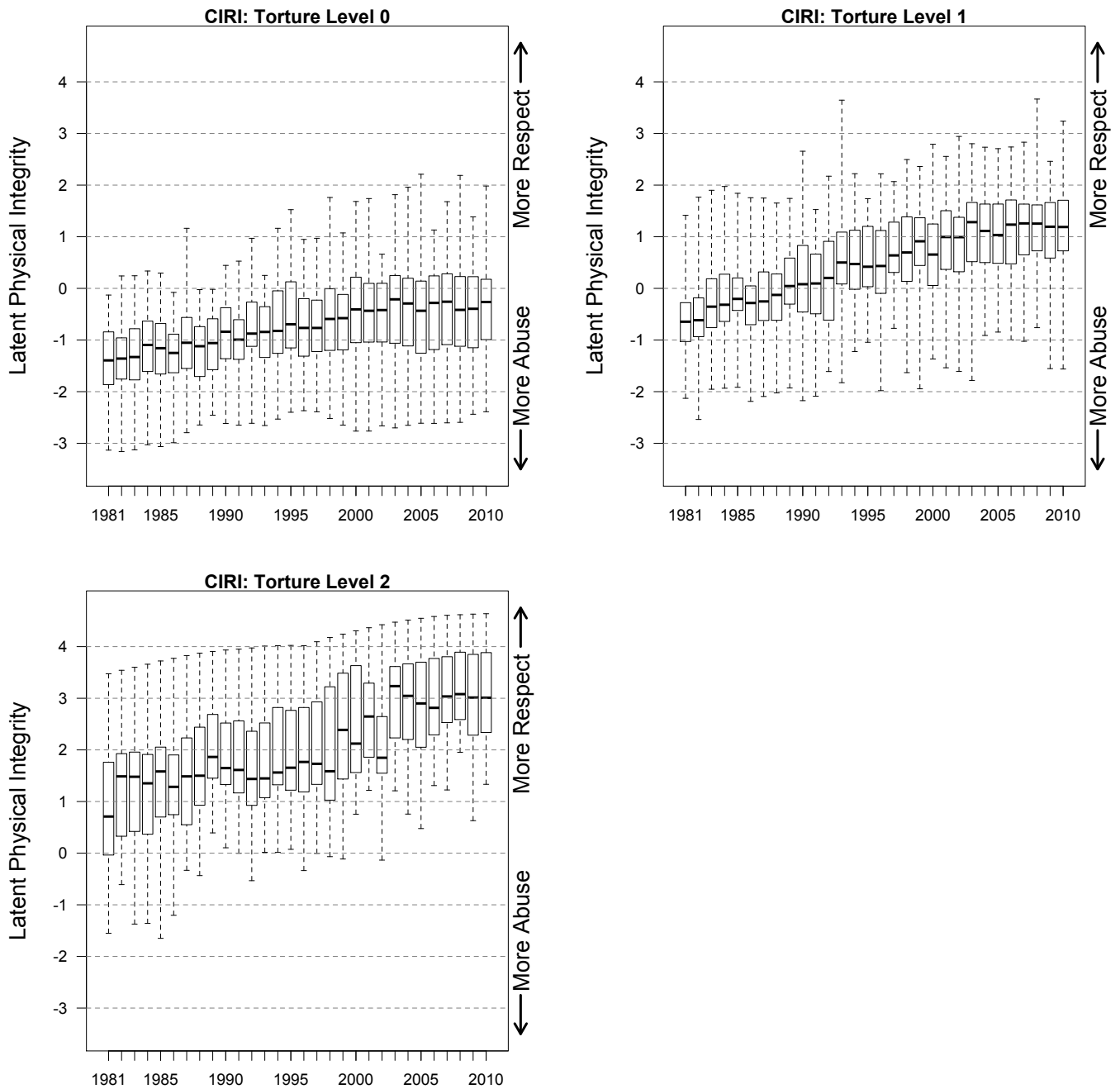


Figure 23: Distribution of country-year units across values of the latent human rights variable from Fariss (2014), for each value from the categorical human rights indicator. More information about the operationalization of the human rights variables are above. This figure offers a visual method of inspecting the relationship between the values of the latent variable and the values of the categorical indicator, which is included in the latent human rights model developed by Fariss (2014).

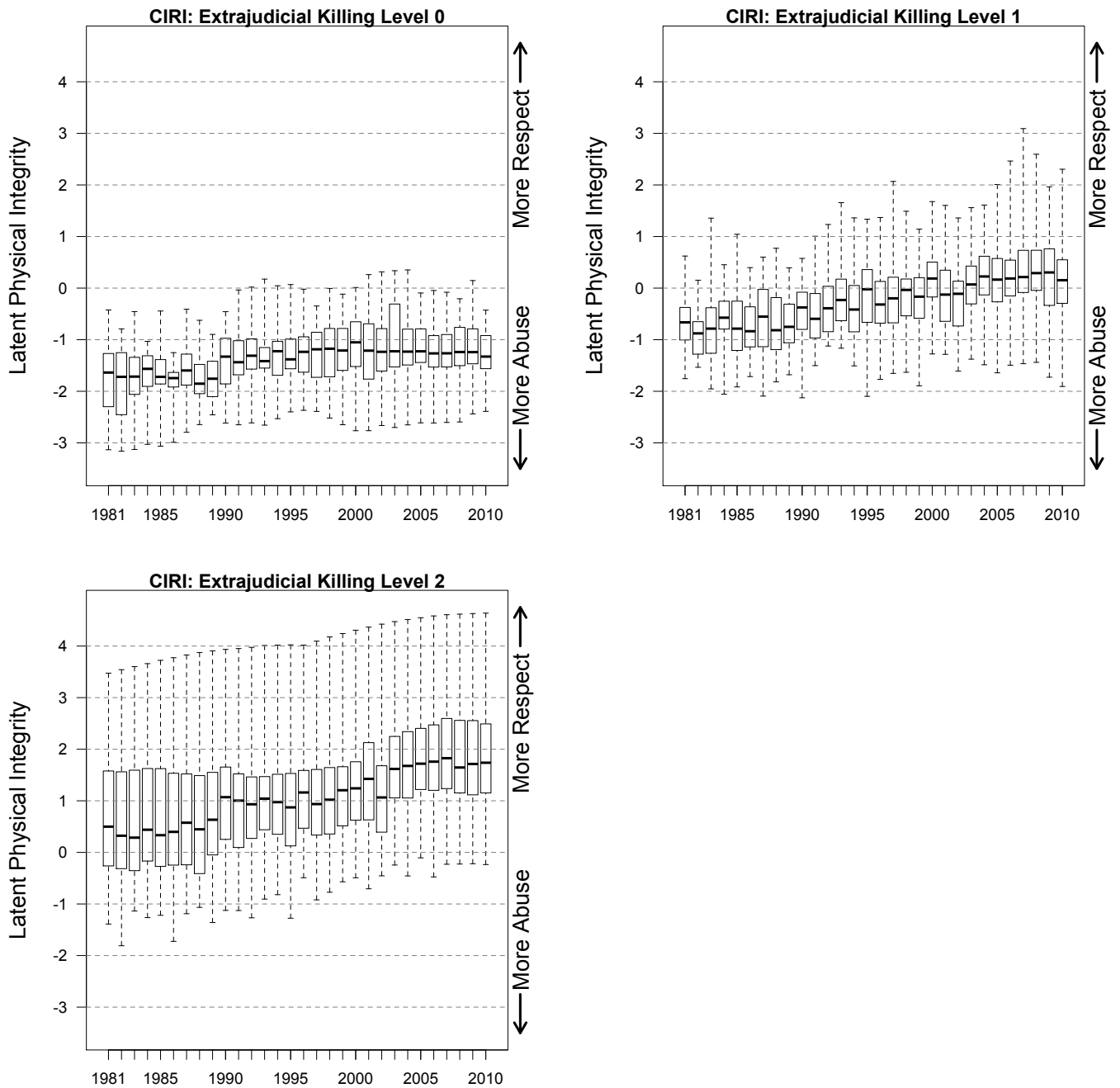


Figure 24: Distribution of country-year units across values of the latent human rights variable from Fariss (2014), for each value from the categorical human rights indicator. More information about the operationalization of the human rights variables are above. This figure offers a visual method of inspecting the relationship between the values of the latent variable and the values of the categorical indicator, which is included in the latent human rights model developed by Fariss (2014).

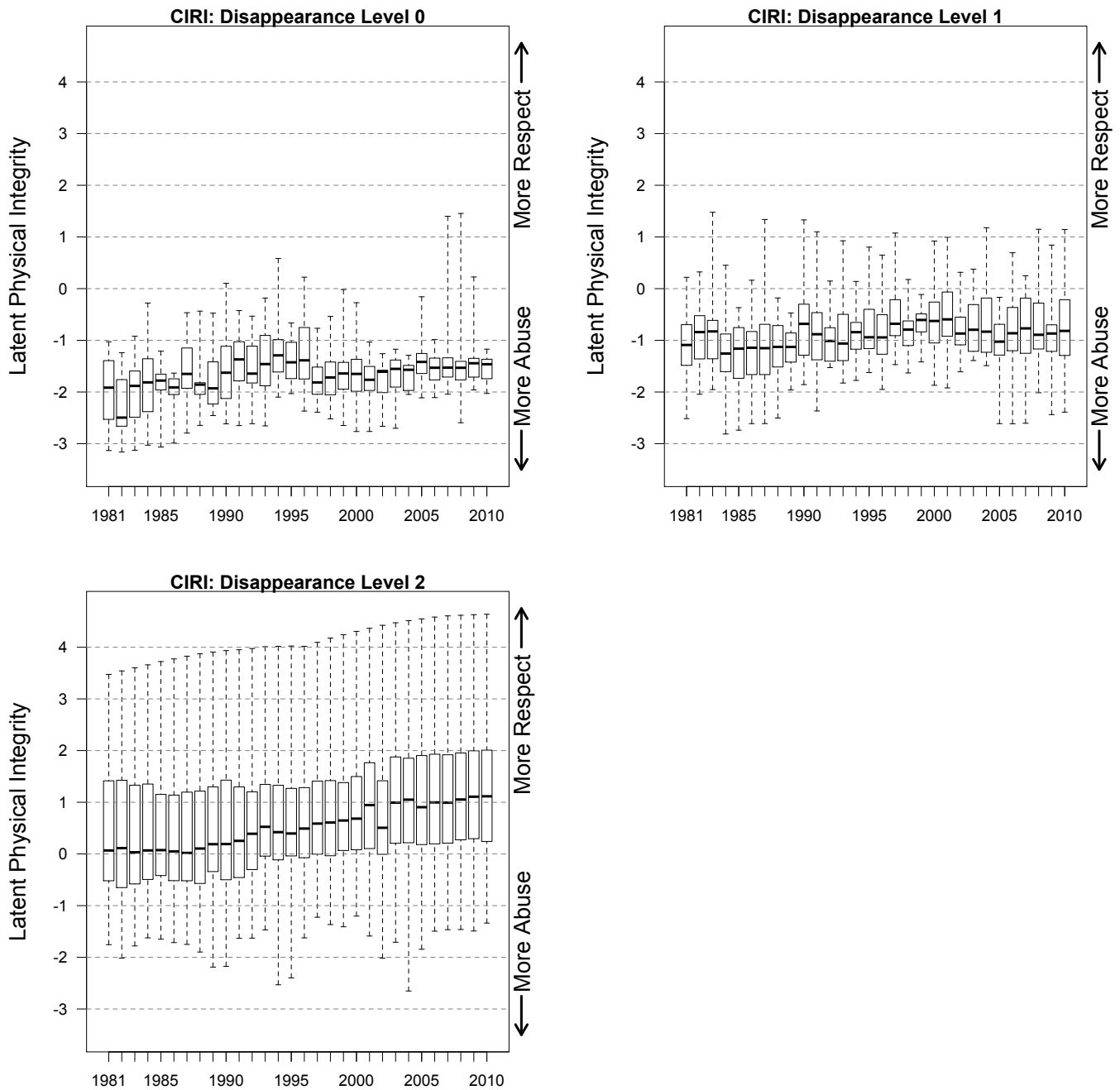


Figure 25: Distribution of country-year units across values of the latent human rights variable from Fariss (2014), for each value from the categorical human rights indicator. More information about the operationalization of the human rights variables are above. This figure offers a visual method of inspecting the relationship between the values of the latent variable and the values of the categorical indicator, which is included in the latent human rights model developed by Fariss (2014).

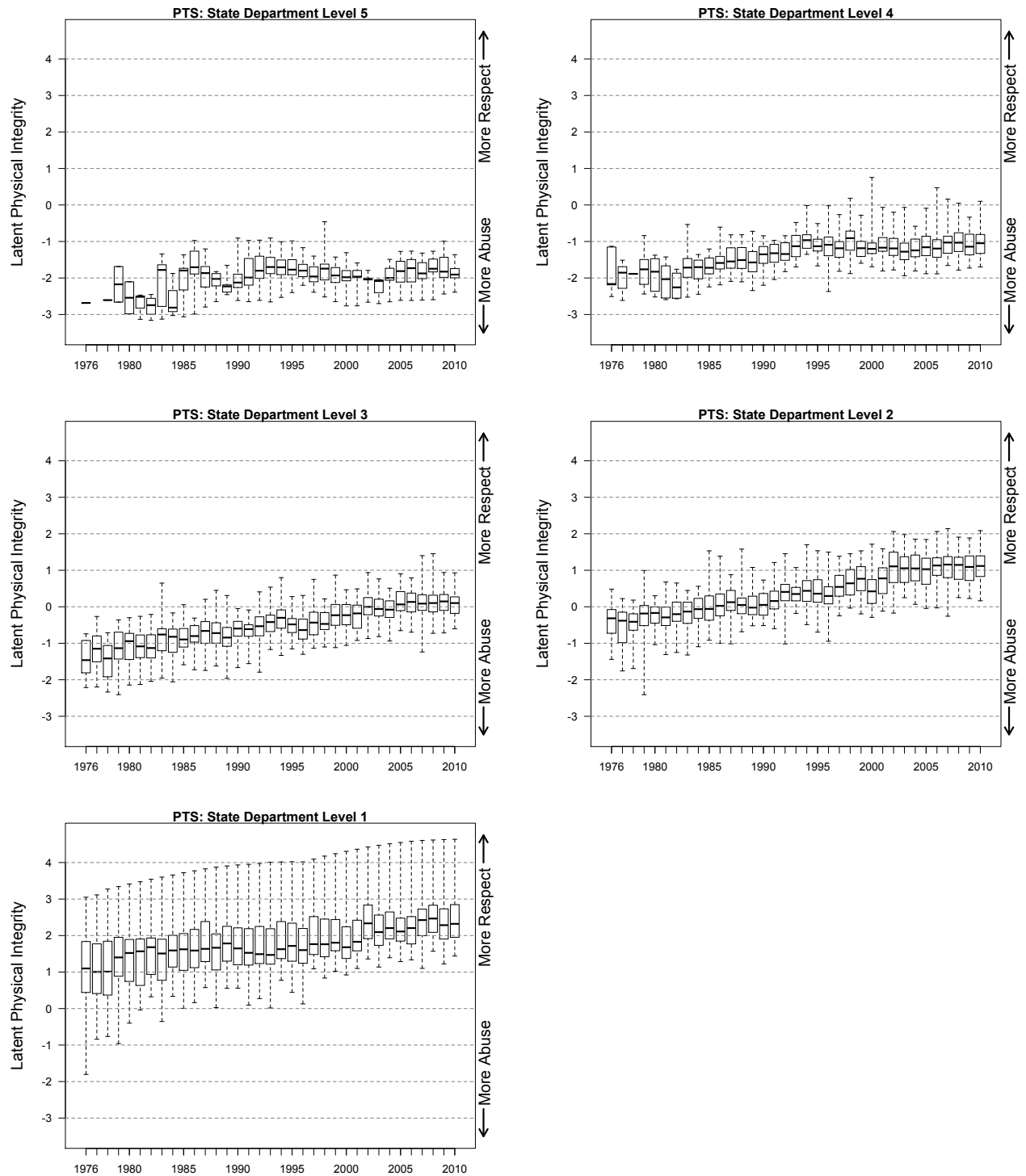


Figure 26: Distribution of country-year units across values of the latent human rights variable from Fariss (2014), for each value from the categorical human rights indicator. More information about the operationalization of the human rights variables are above. This figure offers a visual method of inspecting the relationship between the values of the latent variable and the values of the categorical indicator, which is included in the latent human rights model developed by Fariss (2014).

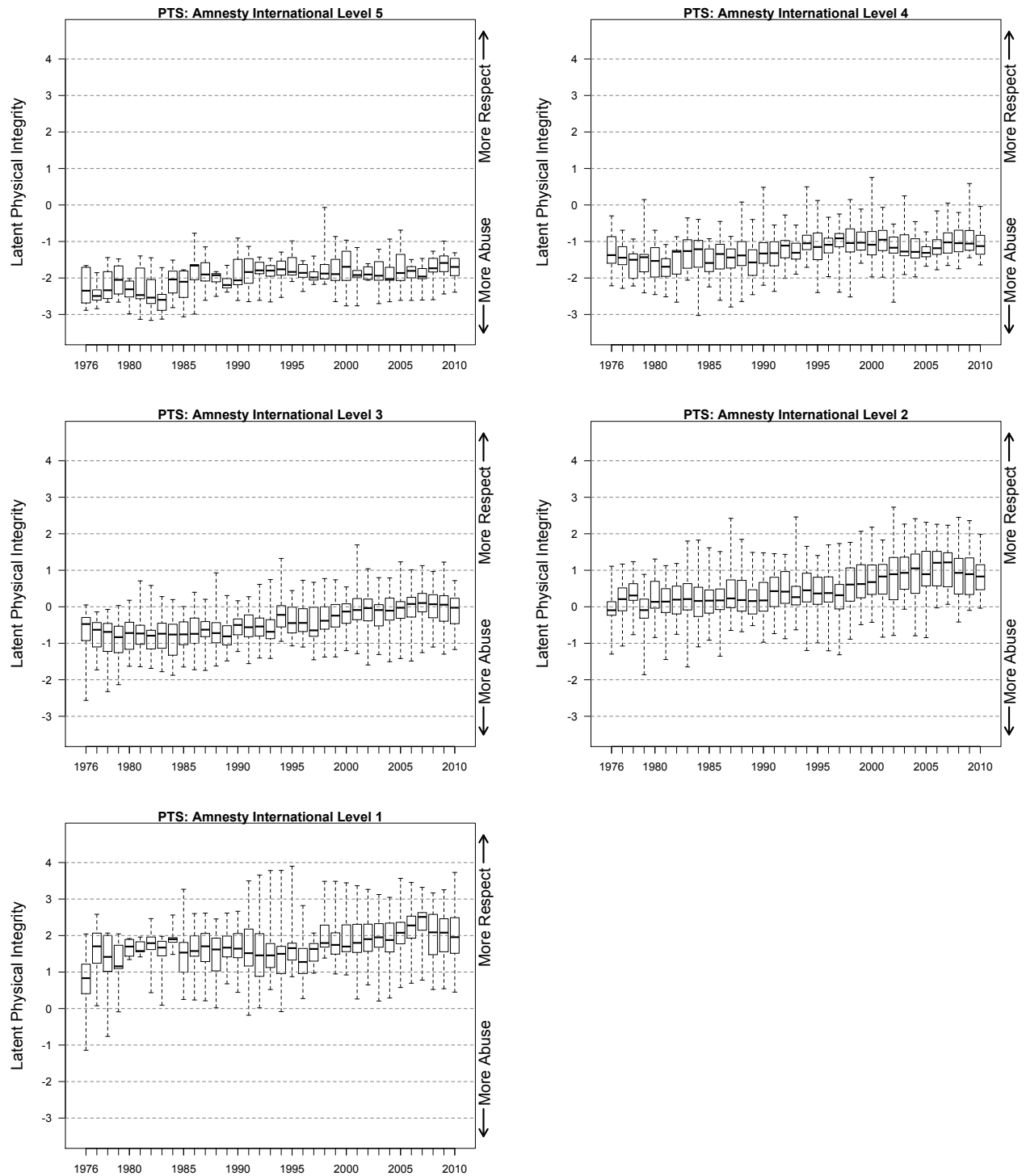


Figure 27: Distribution of country-year units across values of the latent human rights variable from Fariss (2014), for each value from the categorical human rights indicator. More information about the operationalization of the human rights variables are above. This figure offers a visual method of inspecting the relationship between the values of the latent variable and the values of the categorical indicator, which is included in the latent human rights model developed by Fariss (2014).

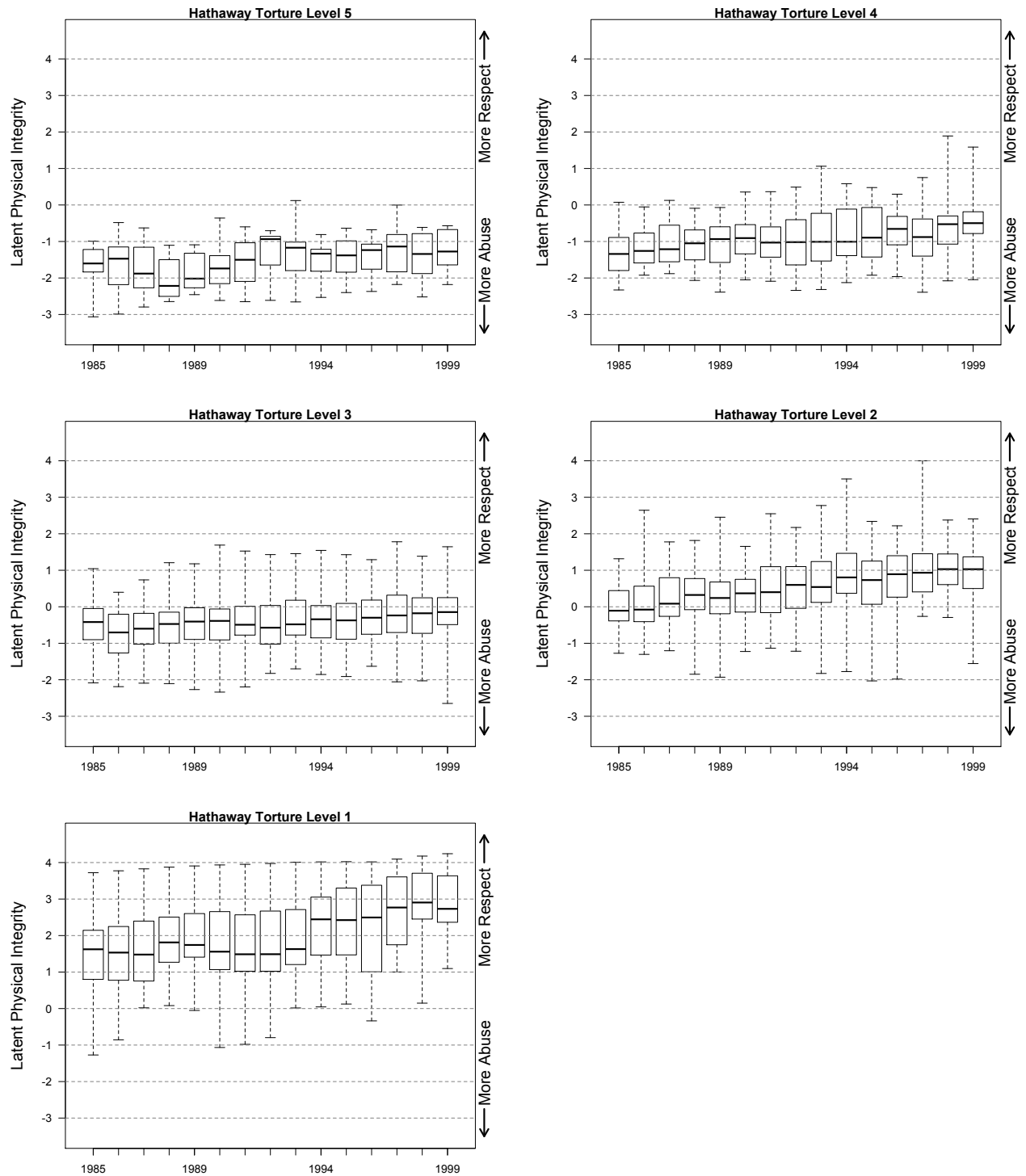


Figure 28: Distribution of country-year units across values of the latent human rights variable from Fariss (2014), for each value from the categorical human rights indicator. More information about the operationalization of the human rights variables are above. This figure offers a visual method of inspecting the relationship between the values of the latent variable and the values of the categorical indicator, which is included in the latent human rights model developed by Fariss (2014).

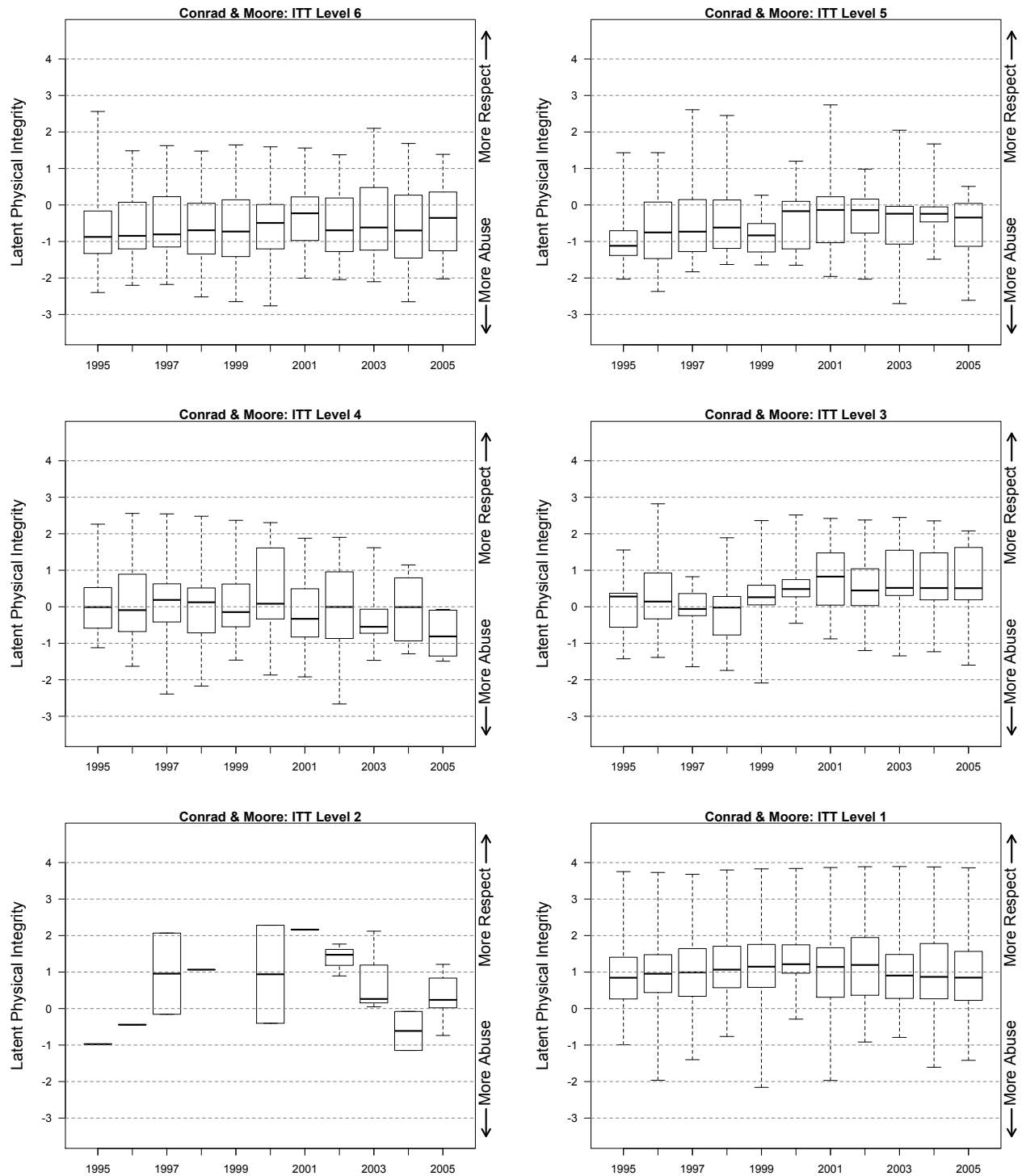


Figure 29: Distribution of country-year units across values of the latent human rights variable from Fariss (2014), for each value from the categorical human rights indicator. More information about the operationalization of the human rights variables are above. This figure offers a visual method of inspecting the relationship between the values of the latent variable and the values of the categorical indicator, which is included in the latent human rights model developed by Fariss (2014).

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