Measuring Tolerance of Homosexuality in the Mass Public Across Countries and Over Time

May 30, 2023

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Abstract

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Examining the Source Data on Tolerance of Homosexuality

Surveys have often included questions about homosexuality over the past half-century, but the resulting data are both sparse and incomparable. That is, these data are unavailable for many countries and years, and they are generated by many different survey items. In all, we identified 45 items that were asked in no fewer than five country-years in countries surveyed at least three times; these items were drawn from 405 different national and cross-national survey datasets.[1] Together, these items were asked in 119 different countries in at least three time points over the 49 years from 1973 to 2022, yielding a total of 3,467 country-year-item observations. Observations for every year in each country surveyed would total 5,831, and a complete set of country-year-items would include 262,395 observations. Viewed from this complete-data perspective, the available data can be seen to be very, very sparse. On the other hand, we do have in the source data 1,479 country-years for which we have at least *some* information about the extent of tolerance of homosexuality in the population, that is, very nearly 50% of the 2,976 country-years spanned by the data we collected. Still, the many different survey items employed render these data incomparable and make them difficult to use together.

Consider the most frequently asked item in the data we collected, which asks respondents whether they think homosexuality "can always be justified, never be justified, or something in between," using a ten-point scale. Employed by the Asia Barometer, the European Values Survey, the Latinobarómetro, and the World Values Survey, this question was asked in a total of 527 different country-years. That this constitutes only 18% of the country-years spanned by our data—and remember, this is the *most common* survey item—again underscores just how sparse and incomparable the available public opinion data is on this topic.

The upper left panel of Figure 1 shows the dozen countries with the highest count of country-year-item observations. The United States, with 190 observations, is far and away the best represented country in the source data, followed by United Kingdom, Germany, Sweden, and Poland. At the other end of the spectrum, four countries—Cambodia, Côte

[1]The complete list of survey items is included in the Appendix.

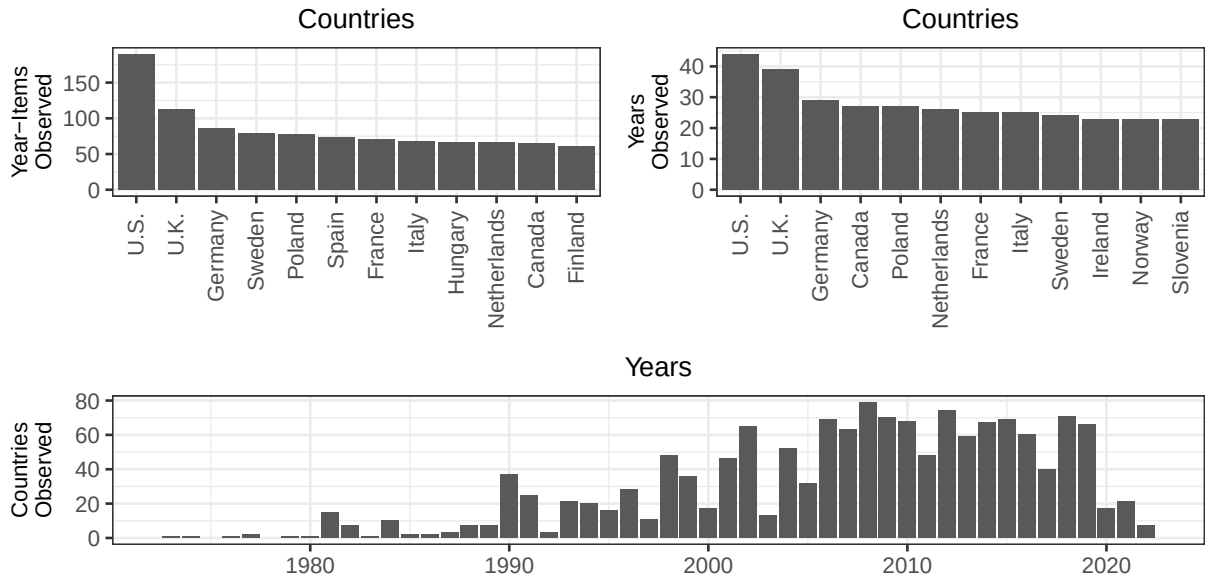

Figure 1: Countries and Years with the Most Observations in the Source Data

d'Ivoire, Sri Lanka, and Tajikistan—have only the minimum two observations required to be included in the source dataset at all. The upper right panel shows the twelve countries with the most years observed; this group is similar, but with Ireland, Norway, and Slovenia joining the list and Spain, Hungary, and Finland dropping off. The bottom panel counts the countries observed in each year and reveals just how few relevant survey items were asked before 1990. Country coverage reached its peak in 2008, when surveys in 79 countries included items on homosexuality.

Figure 2 displays the most recent available TOLH score for each of the 119 countries and territories in the dataset. Iceland, the Netherlands, Belgium, and the Scandinavian countries are the places where the public is most accepting of homosexuality. The latest scores for Ethiopia, Uganda, Armenia, Egypt, and Mali indicate there is very little tolerance in those countries.

Figure 3 displays how TOLH scores have changed over time in sixteen countries. It further underscores what is already evident in Figure 2: the cross-regional scope of the TOLH dataset allows comparison of countries too often neglected in political science analyses (see Wilson and Knutsen 2022). The figure also shows that while public opinion toward homo-

Figure 2: TOLH Scores, Most Recent Available Year

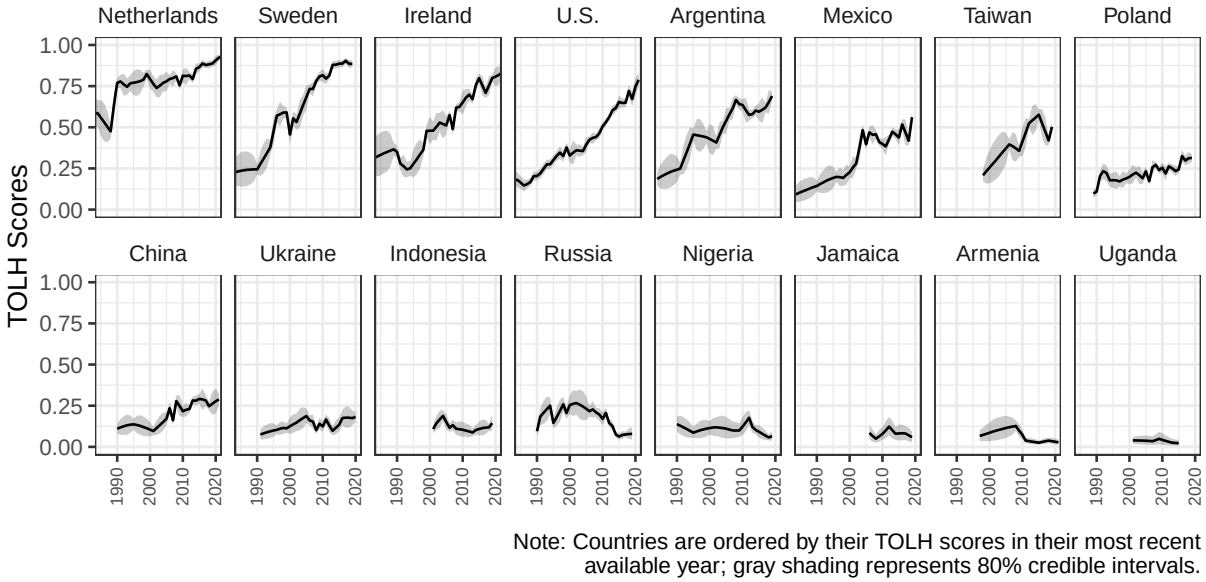

Figure 3: Tolerance Over Time Within Selected Countries

sexuality has grown rapidly more tolerant in some countries, such as Sweden and the United States, attitudes have changed much more gradually over time in others, like Poland and China. Tolerance has advanced and retreated somewhat as in Taiwan and more completely as in Russia. And in countries such as Nigeria and Uganda, the extent of tolerance of homosexuality in the public has been steadily scant. The breadth of these differences stand as a challenge to our explanations for the causes and consequences of public tolerance of homosexuality.

Validating the Tolerance of Homosexuality Scores

Before these estimates can be used, however, they must be validated: the mere fact that we can generate estimates for tolerance of homosexuality does not automatically mean that they are suitable for analysis. Just as with any other new measure, validation tests of cross-national latent variables are crucially important (see, e.g., Hu et al. 2023). Figure 4 and Figure 5 provide evidence of this measure's validity with tests of convergent validation and construct validation. Convergent validation refers to tests of whether a measure is empirically

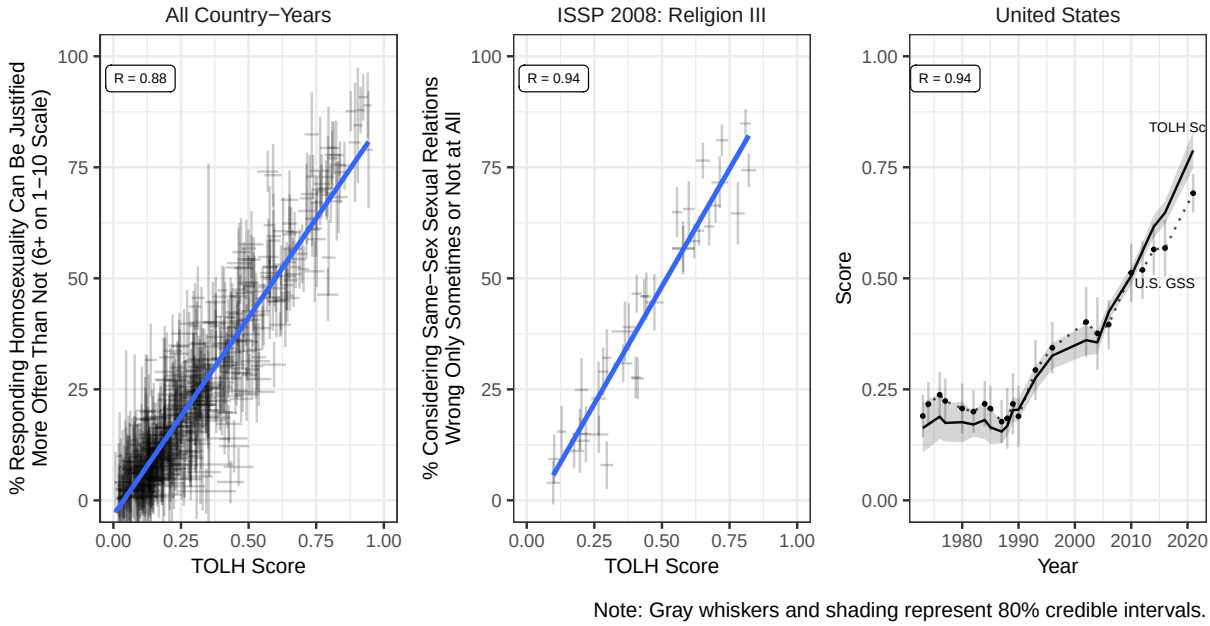

Figure 4: Convergent Validation: Correlations Between TOLH Scores and Individual Source-Data Survey Items

associated with alternative indicators of the same concept (Adcock and Collier 2001, 540). In Figure 4, the TOLH scores are compared to responses to individual source-data survey items that were used to generate them; this provides an 'internal' convergent validation test (see, e.g., Caughey, O'Grady, and Warshaw 2019, 689; Solt 2020b, 10). The left panel is a scatterplot of country-years in which the TOLH scores are plotted against the percentage of respondents who gave an accepting response to the most commonly asked item in the source data: whether homosexuality can always be justified, scored ten, never be justified, scored zero, or something in between. For this plot, responses six or greater are considered as indicating that whether respondents consider homosexuality justified more often than not. The middle panel shows responses to the question with the most data-rich cross-section, "And what about sexual relations between two adults of the same sex, is it always wrong, almost always wrong, wrong only sometimes, or not wrong at all?" in the International Social Survey Program's 2008 module on Religion, plotting our latent variable of tolerance against the percentage who responded "wrong only sometimes" or "not at all." Finally, in the right

panel, the U.S. General Social Survey's series on this same item—the longest of any item in any single country in the source data—was used to evaluate how well the TOLH scores capture change over time. The correlations, estimated taking into account the uncertainty in the measures, are very strong in all three cases.

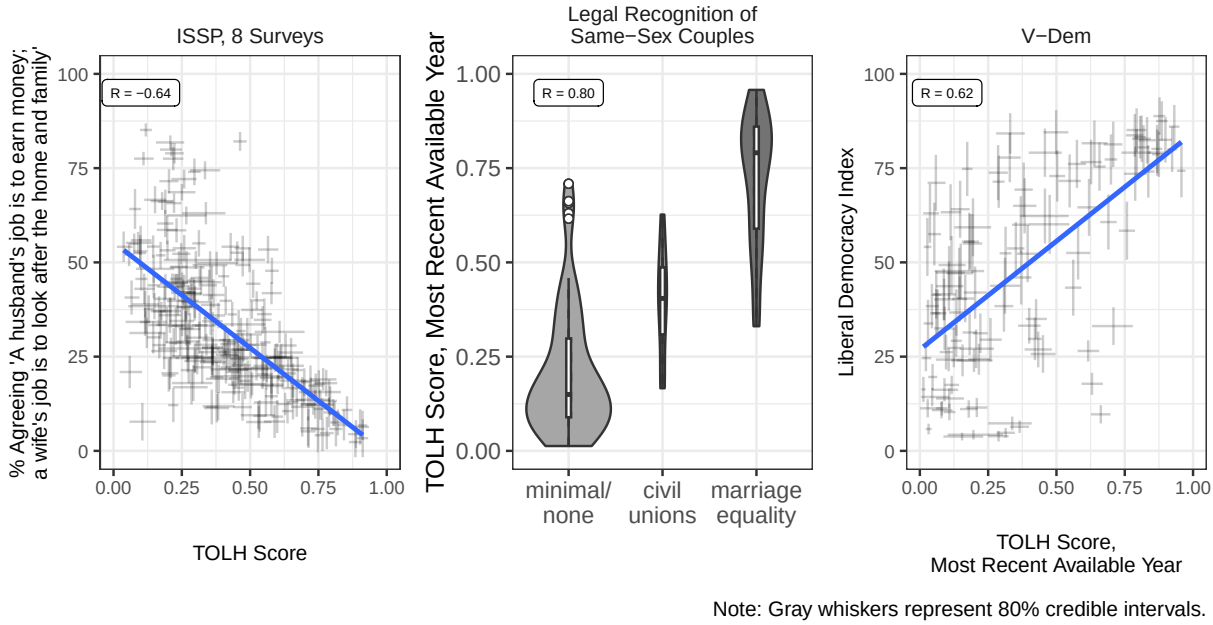

Figure 5: Construct Validation: Correlations Between TOLH Scores and tolerance of Homosexuality Survey Items

Figure 5 moves on, then, to construct validation. Construct validation refers to demonstrating, for some *other* concept believed causally related to the concept a measure seeks to represent, that the measure being tested is empirically associated with measures of that other concept (Adcock and Collier 2001, 542). More traditional attitudes toward gender roles are often argued to yield more intolerance of homosexuals (see, e.g., Brown and Henriquez 2008). The left panel compares traditional gender attitudes, measured as the percentage of those agreeing or strongly agreeing with the statement, "A husband's job is to earn money; a wife's job is to look after the home and family," in eight ISSP surveys (Family and Changing Gender Roles in 1988, 1994, 2002, and 2012; and Religion in 1991, 1998, 2008, and 2018), with the TOLH scores.

As a result of policy responsiveness, that is, the influence of public opinion on policy (see, e.g., Lax 2009), and policy feedback, the influence of policy on public opinion (see, e.g., Abou-Chadi and Finnigan 2019; Earle et al. 2021), public tolerance of homosexuality is expected to be closely related to policies recognizing same-sex relationships. The figure's center panel presents violin plots of the distribution of TOLH scores in the most recent available year across three groups of countries: those that currently have no or minimal legal recognition of same-sex relationships, those that recognize civil unions, and those with marriage equality. The gray-shaded 'violins' depict mirrored kernal density plots of the observations in each group; their areas are proportional to the number of observations. The violins are inset with box-and-whisker plots showing the 25th percentile, median, and 75th percentile as horizontal lines in a box; the dashed vertical whiskers then extend to the farthest observation within 1.5 times the interquartile range, that is, the height of the box; and all observations beyond that distance are shown individually as white circles (see Tukey 1977).

A third oft-theorized relationship is that liberal democracies promote generally more tolerant attitudes that lead to greater tolerance of homosexuality (see, e.g., Adamczyk 2019). The right panel of Figure 5 plots the TOLH score of the most recent available year for each country against the V-Dem Liberal Democracy Index for that country-year. In each of these three cases, the relationship is in the expected direction and strong to very strong. The evidence of convergent validation in Figure 5, together with the evidence of construct validation in Figureand 4, demonstrates the validity of the TOLH scores as measures of the public's tolerance of homosexuality.

Testing Theories on Tolerance of Homosexuality: Revisiting 'Economic Inequality and Intolerance'

As an example of the utility of the TOLH data, we revisit Andersen and Fetner's (2008) foundational work on economic inequality and intolerance. The piece argues that postmaterialist theory (see, e.g., Inglehart and Welzel 2005) implies that greater inequality should be expected to yield greater intolerance of homosexuality: if economic prosperity is what

provides societies with the security needed to leave such traditional biases behind, then when a society's prosperity (and security) is not broadly shared, more tolerant attitudes will not be broadly shared either.[2] Supporting this view, its analysis found that more economic inequality leads to more intolerance of homosexuality. Despite the article's influence, it was flagged in a recent review of the literature as a study for which "more research is needed to replicate and confirm [its] findings" (Adamczyk and Liao 2019, 415). Indeed, one recent work finds no support at all for the hypothesized relationship between inequality and tolerance of homosexuality (Zhang and Brym 2019, 515).

One difference between these two works that is potentially important to their diverging conclusions is the sample employed. Both works draw on World Values Survey data, but the group of countries each examines differs in size and in kind. Noting the particular importance to democracies of tolerance of social and political difference, Andersen and Fetner (2008) examined only democratic countries. Its analyses included 35 countries, observed in just one to four years each, for a total of 63 country-years, that is, a mean of 1.8 years observed per country. The sample analyzed in Zhang and Brym (2019), on the other hand, incorporated a wider range of cases including non-democracies. This broader scope—along with the additional WVS survey waves conducted in the time between the two pieces' writing—yielded 88 countries and 214 country-year observations for an increased mean number of years observed of 2.4 per country. So although the different conclusion reached by Zhang and Brym (2019) may reflect the larger number of countries that study included (see Zhang and Brym 2019, 517), it may have also resulted from the inclusion of non-democratic countries.

The TOLH data allow us to revisit the Andersen and Fetner (2008) hypothesis with many, many more observations of economic inequality and tolerance from a broader sample of countries than either of these two previous works and also to assess whether tolerance in democratic countries is distinctively sensitive to income inequality. Our sample of democracies includes the 36 democratic countries of the OECD, each observed in 21 (Costa Rica) to

[2]An alternate, possibly complementary, theory would be that greater inequality gives wealthier individuals both greater means and enhanced motive to promote religiosity among their fellow citizens (see, e.g., Solt, Habel, and Grant 2011; Solt 2014), and more religiosity in turn works to decrease tolerance (see, e.g., Adamczyk and Pitt 2009). We leave distinguishing between these two theories to future research.

49 (the United States) consecutive years (mean: 33.4 years, median: 31.5 years), a total of 1203 country-year observations. The broader sample of all countries includes 114 countries, observed in 2 to 49 consecutive years each, for a total of 2623 country-year observations. That is, the TOLH dataset provides a number of country-years observations for our sample of democracies that is some 19 times greater than that considered in Andersen and Fetner (2008), and it gives us a number of country-years in our sample of all countries that is about 12 times greater than that in the sample employed in Zhang and Brym (2019). This much larger evidentiary base provides us with a much firmer basis for drawing conclusions (see, e.g., King, Keohane, and Verba 2021, 23).

The independent variable, economic inequality, is measured using the Gini index of disposable income inequality. The Gini index ranges from 0, indicating perfect equality in the distribution, in this case, of income after taxes and government transfers, to 100, indicating a perfectly unequal distribution in which a single household receives all such income. The data are drawn from the Standardized World Income Inequality Database (Solt 2020a).

We also include the country-year- and country-level control variables included in the analysis in Andersen and Fetner (2008). Data on GDP per capita (in thousands of constant 2015 U.S. dollars) are provided by the World Bank's World Development Indicators (World Bank 2023). A series of dichotomous country-level variables identify a country's religious heritage—countries are coded as having alternately a Catholic, Orthodox, Eastern, or Islamic heritage, with those with a Protestant heritage treated as the reference category—and countries with a Communist history are also identified with such a variable (see Inglehart and Welzel 2005). Finally, although its presence does not impact the results, we add a dichotomously-coded variable for the presence of marriage equality, which takes on a value one in country-years where same-sex marriage was legal and zero otherwise (at the time of publication of Andersen and Fetner (2008), only five countries had legalized same-sex marriage, and the data analyzed in that piece ended before any of those policy adoptions).

Shor et al. (2007) shows that the best way to analyze such pooled time series is by using a Bayesian multilevel model that includes varying intercepts for each country and for

each year. Varying intercepts for each country help account for heteroskedasticity across space due to, e.g., omitted variable bias, while permitting the inclusion of time-invariant predictors such as religious heritage and communist past. Varying intercepts for each year take into account 'time shocks' that operate on all countries simultaneously (Shor et al. 2007, 171–72). We further employ the 'within-between random effects' specification, meaning each of the time-varying predictors is decomposed into its time-invariant country mean and the difference between each country-year value and this country mean. The time-varying difference variables capture the short-term effects of the predictors, while the time-invariant country-mean variables reflect their—often different—long-run, "historical" effects (Bell and Jones 2015, 137). This specification has been shown superior for addressing omitted variable bias and endogeneity to fixed effects and other commonly used specifications for time-series cross-sectional data like these (see Bell and Jones 2015). The measurement uncertainty in the data for both tolerance of homosexuality and income inequality was incorporated into the analysis as well (see Tai, Hu, and Solt 2022). The model was estimated using the `brms` R package (Bürkner 2017).

The results are presented in Figure 6. Greater income inequality is associated with less tolerance of homosexuality, both in the long run and in the short term, in both samples of countries. Looking at the 'historical,' long-run effect of income inequality, we see that in the democratic sample, a two-standard deviation increase in a country's mean inequality is associated with 14.2 points less tolerance (95% credible interval: -22.4 to -5.1 points), while across all countries this estimated difference was -6.1 (95% c.i.: -10.6 to -1.6) points. In the short run, a two-standard-deviation year-to-year change was found to decrease tolerance 1.3 points (95% c.i.:-2.3 to -0.3) among democracies. If anything, the estimated decline in tolerance was even larger when all countries are considered: 2.2 (95% c.i.: -2.8 to -1.6) points. Having much more data provides strong evidence that income inequality decreases tolerance of homosexuality and that democracies are not particularly sensitive to this effect.

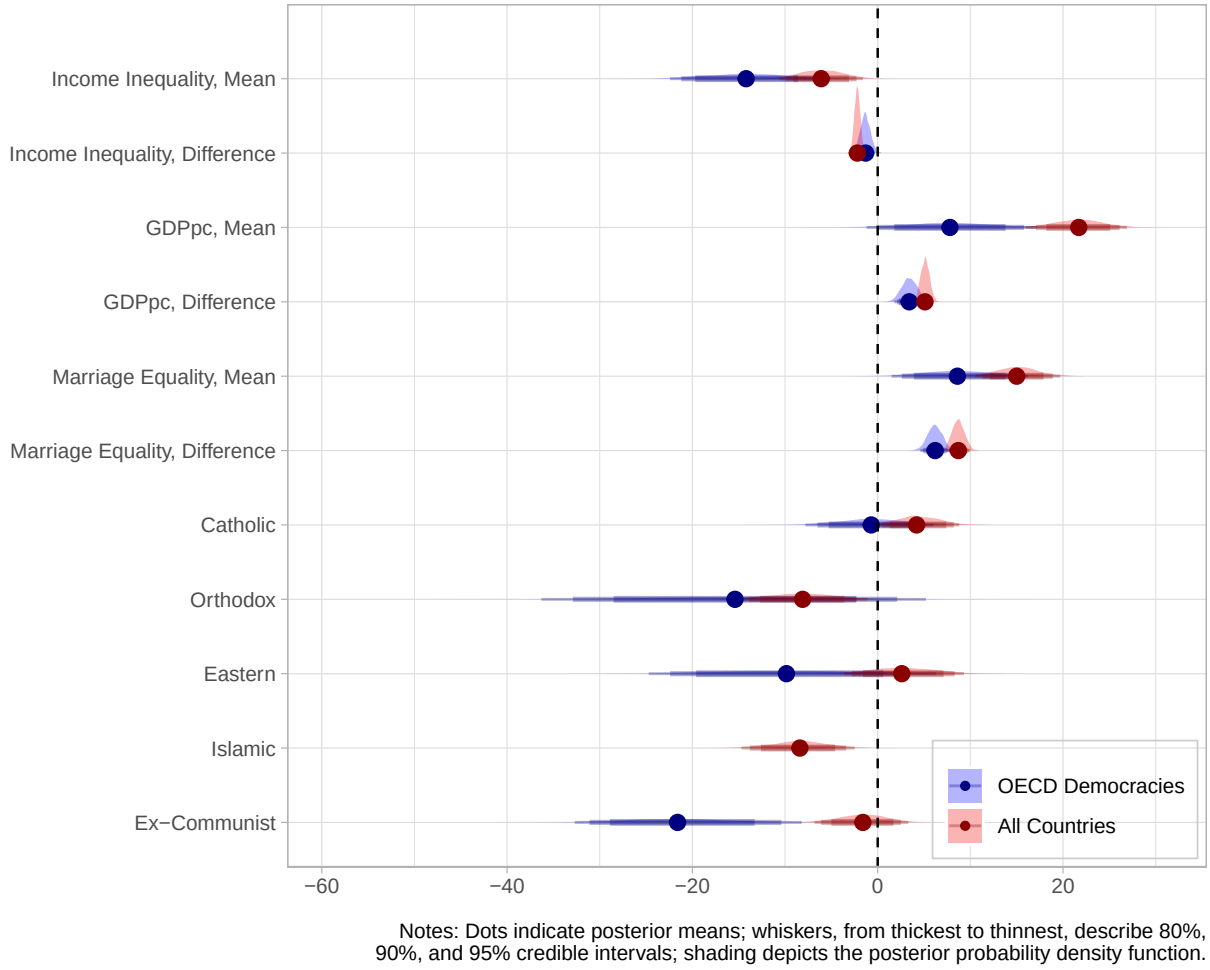

Figure 6: Predicting Tolerance of Homosexuality

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May 30, 2023

Appendices

Appendix A: Survey Items Used to Estimate tolerance of Homosexuality

National and cross-national surveys have often included questions tapping interest in politics over the past four decades, but the resulting data are both sparse, that is, unavailable for many countries and years, and incomparable, generated by many different survey items. In all, I identified 45 such survey items that were asked in no fewer than five country-years in countries surveyed at least three times; these items were drawn from 405 different survey datasets. These items are listed in the table below, along with the dispersion (α) and difficulty (β) scores estimated for each from the DCPO model. Lower values of dispersion indicate questions that better identify publics with a higher level of trust from those with lower. Items have one less difficulty score than the number of response categories. Survey dataset codes correspond to those used in the `DCPOtools` R package (Solt, Hu, and Tai 2019); they appear in decreasing order of country-years contributed.

Together, the survey items in the source data were asked in 119 different countries in at least two time points over 49 years, from 1973 to 2022, yielding a total of 3,467 country-year-item observations. The number of items observed in the source data for each country-year is plotted in Figure A1 below. The estimates of tolerance in country-years with more observed items are more precise. In country-years with fewer observed items, the estimates rely more heavily on the random-walk prior and are therefore more uncertain, and when there are no observed items, the estimates rely *entirely* on the random-walk prior and so uncertainty increases still further.

Table A1: Indicators Used in the Tolerance of Homosexuality Latent Variable Model

Survey Item Code	Country-Years	Question Text	Response Categories	Dispersion	Difficulties	Survey Dataset Codes
just10	527	Please tell me for each of the following statements whether you think it can always be justified, or something in between, using this card. READ OUT STATESMENTS. COME ONE ANSWEWR FOR EACH[Homosexuality]	[1-10]1 Never Justifiable 10 Always justifiable	0.42	0.01, 0.30, 0.54, 0.75, 1.39, 1.70, 1.98, 2.35, 2.63	evs, wvs, asiab, lb, caucasusb
neigh2	520	Homosexuals. Would you mind having them as neighbors?	0 Do not have a problem with having them as neighbors / 1 Do not want them as neighbors	0.86	-0.33	evs, wvs, lits, cid, lb, fsdreligion, amb
free5	264	Homosexuality is a personal behavior, others should not blame	1 Strongly disagree / 2 disagree / 3 Neither / 4 Agree / 5 Strongly Agree	1.23	-3.08, -1.54, -0.08, 2.69	ess, ress, seessp, cgss
accept2	211	And which one of these comes closer to your opinion?	1 homosexuality is a way of life that should be accepted by society / 2 homosexuality is a way of life that should not be accepted by society	0.62	0.63	uspew, gallup, pew, pewrel
approve4	209	A sexual relationship between two adults of the same sex	1 Very bad 2 Fairly bad 3 Not so bad 4 Definitely not bad	0.21	0.55, 1.00, 1.58	usgss, issp, lat, bsa, allbus, pgss, isshr, chcep, seessp, jgss, nsss, twscs
run10	177	And now, changing the topic and thinking of homosexuals, how strongly do you approve or disapprove of such people being permitted to run for public office?	1 Strongly Disapprove 2 3 4 5 6 7 8 9 10 Strongly Approve	0.56	-0.67, -0.32, -0.05, 0.21, 0.65, 0.95, 1.27, 1.66, 1.99	amb
hioff10	140	Using a scale from 1 to 10, please tell me how you would feel about having a person from each of the following groups in the highest elected political position in	1 Not at all comfortable / 23456789 / 10 Totally comfortable	0.16	-0.83, -0.53, -0.22, 0.02, 0.50, 0.76, 1.06, 1.44, 1.75	eb
approve3	92	Is homosexual behavior morally acceptable, morally wrong, or is it not a moral issue?	1 morally acceptable / 2 morally wrong / 3 not a moral issue	0.44	0.86, 2.00	uspew, pew, pewrel
marry4a	90	Overall, do you support or oppose allowing gays and lesbians to marry legally?	1 Support strongly 2 Support somewhat 3 Oppose somewhat 4 Oppose strongly	0.82	-0.59, 1.06, 3.36	nbcwsj, lat, uspew, prri, abcwapo, pewrel, pew, lb, aes
marry4e	85	For each of the following propositions, tell me if you Homosexual marriages should be allowed throughout Europe?	Totally agree 1 totally disagree 4	0.09	-0.01, 0.84, 2.06	eb
marry10	80	How strongly do you approve or disapprove of same-sex couples having the right to marry?	1 Strongly disapprove / 23456789 / 10 Strongly approve	0.24	0.18, 0.48, 0.68, 0.86, 1.17, 1.36, 1.58, 1.82, 2.07	amb

(continued)

Survey Item Code	Country-Years	Question Text	Response Categories	Dispersion	Difficulties	Survey Dataset Codes
adopt5	80	How acceptable or unacceptable do you consider the following issues? That homosexual and lesbian couples have the right to adopt children	1 completely unacceptable 2 unacceptable 3 neither acceptable nor unacceptable 4 acceptable 5 completely acceptable	0.76	-0.61, 0.74, 1.77, 3.37	bsa, ess, belgiumes, dkes, nores, icenes
parent5	79	How much do you agree or disagree with this statement? Homosexual couples are as good parents as other couples	Agree strongly1 strongly disagree 5	0.88	-1.52, 0.30, 1.53, 3.49	wvs, evs
ashamed5	73	If a close family member was a gay man or a lesbian, I would feel ashamed.	Agree strongly 1 Disagree strongly 5	1.01	-2.55, -0.88, 0.39, 2.30	ess
marry3	69	What is your view on same-sex marriage?	1 Favour same-sex marriage / 2 Oppose same-sex marriage, but would accept civil unions / 3 Oppose entirely same-sex marriage	0.97	-0.74, 0.90	ipsos, cgeis
rights4	57	To what extent do you agree or disagree with each of the following statements? Gay, lesbian and bisexual people should have the same rights as heterosexual people	Totally agree 1 totally disagree 4	0.72	-1.31, -0.12, 1.67	eb, itanes
approve4a	56	To what extent do you agree or disagree with each of the following statements?There is nothing wrong in a sexual relationship between two persons of the same sex	Totally agree 1 totally disagree 4	0.71	-0.93, 0.34, 2.00	eb
adopt4a	55	Same-sex couples' right to adopt is a good thing	1 strongly agree / 2 somewhat agree / 3 somewhat disagree / 4 strongly disagree	0.55	0.01, 1.03, 2.31	prri, ipsos, prriatlantic, fsdelection, ptvs
adopt5a	53	How would you feel about the following statement? Do you agree or disagree with them? Homosexual couples should be able to adopt children	Agree strongly1 strongly disagree 5	1.70	-0.90, 1.41, 3.01, 5.61	evs, som, snes, ptvs
adopt2	51	Do you favor or oppose allowing gay or lesbian couples to adopt a child?	1 Favor 2 Oppose 8 DK/No opinion 9 NA/Refused	0.10	1.60	gallup, anes, cnn, psra, abcwapo, bsa, eb, pew, angus
marry4c	47	Same-sex marriage is or could be harmful to society	1 strongly disagree / 2 somewhat disagree / 3 somewhat agree / 4 strongly agree	0.45	-0.77, 0.33, 1.48	ipsos
marry2	39	Do you think homosexuals should or should not have equal rights to marry one another?	1 Should have equal rights to marry 2 Should not have equal rights to marry 8 DK/No opinion 9 NA/Refused	0.88	1.20	cnn, abcwapo, psra, ap, gallup, uspew, cces, eb, angus, aes
ff5	39	same sex female couple can bring up a child as well as a male-female couple	1 Strongly agree / 2 Agree / 3 Neither agree nor disagree / 4 Disagree / 5 Strongly disagree	0.74	-0.73, 0.87, 1.62, 3.67	issp

(continued)

Survey Item Code	Country-Years	Question Text	Response Categories	Dispersion	Difficulties	Survey Dataset Codes
mm5	39	same sex male couple can bring up a child as well as a male-female couple	1 Strongly agree / 2 Agree / 3 Neither agree nor disagree / 4 Disagree / 5 Strongly disagree	0.72	-0.38, 1.17, 1.94, 3.80	issp
marry5a	33	Here are some statements about general social concerns. Please say whether you strongly agree, agree, disagree or strongly disagree with each of these statements. Same-sex marriages should be prohibited by law	1 Strongly agree / 2 Agree / 3 Neither agree nor disagree / 4 Disagree / 5 Strongly disagree	0.65	-0.71, 0.39, 1.15, 2.56	ees, ptvs, ines, aes
approve5	30	What about sexual relations between two adults of the same sex?	1 Always wrong 2 Mostly wrong 3 Sometimes wrong 4 Rarely wrong 5 Not wrong at all	0.11	0.46, 0.80, 1.32, 1.65	bsa, cgss
adopt4	29	For each of the following propositions, tell me if you Adoption of children should be authorised for homosexual couples throughout Europe	Totally agree 1 totally disagree 4	0.76	0.67, 1.81, 3.31	eb
marry5	28	Agree: The law should recognise same-sex relationships	1 Strongly agree / 2 Agree / 3 Neither agree nor disagree / 4 Disagree / 5 Strongly disagree	0.56	-0.26, 0.69, 1.51, 2.96	issp, usgss, bsa, som, chcep, nsss, aussa, kgss
marry11	28	I would like you to tell me your views on various issues: same-sex marriage	0 fully in favour of same sex marriage / 123456789 / 10 fully opposed to same sex marriage	1.13	-0.41, -0.15, 0.17, 0.46, 0.67, 1.57, 1.82, 2.15, 2.50, 2.91	ees
neigh10	27	Having a homosexual	1 Not at all comfortable / 23456789 / 10 Totally comfortable	0.86	-2.37, -1.94, -1.50, -1.20, -0.55, -0.23, 0.14, 0.68, 1.21	eb
civil2	22	.Allowing homosexual couples to have the same benefits as married heterosexual couples, such as health benefits inheritance rights and Social Security survivor benefits	1 Support 2 Oppose 8 DK/No opinion 9 NA/Refused	0.86	0.61	abcwapo, eb, politbarometer, gallup
accept4	20	Homosexuals are people who should be accepted like anybody else	Agree completely 1 Disagree completely 4	0.90	-2.04, -0.92, 0.91	cdcee
pension4	16	Couples of the same sex should be entitled to a widow's/widower's pension as if they had lived with a partner of the opposite sex	1 strongly agree / 2 agree / 3 disagree / 4 strongly disagree	0.82	-0.75, 0.20, 2.04	eb
marry4d	13	Gays and lesbians should be allowed to get married	1 strongly agree / 3 somewhat agree / 5 somewhat disagree / 7 strongly disagree	0.20	0.44, 1.15, 2.42	uspew, fsdelection, cnes, poc, canadianes, twscs
neigh5	13	For each of the following types of people, please tell me whether you would like having people from this group as neighbors, dislike it, or not care: Homosexuals	1 strongly dislike / 2 somewhat dislike / 3 would not care / 4 somewhat like / 5 strongly like	0.45	-0.38, 0.19, 1.54, 2.20	afrob

(continued)

Survey Item Code	Country-Years	Question Text	Response Categories	Dispersion	Difficulties	Survey Dataset Codes
legal2	12	Do you think homosexual relations between consenting adults should or should not be legal	1 should be legal / 2 should not be legal	0.70	-0.21	gallup, abcwapo, cbsnyt, cnn, uswapo, anpas, aes
teacher4	12	School boards ought to have the right to fire teachers who are known homosexuals	1 completely agree / 2 mostly agree / 3 mostly disagree / 4 completely disagree	0.75	-1.56, -0.48, 1.18	uspew
legal2a	9	Do you think gay or lesbian relations between consenting adults should or should not be legal?	1 should be legal / 2 should not be legal	1.68	-0.03	gallup
accept2a	7	Do you feel that homosexuality should be considered an acceptable alternative lifestyle or not?	1 acceptable / 2 not acceptable	1.40	0.43	gallup, usnwr, cbsnyt
accept5	7	Homosexuals are people just like others	1 Disagree completely / 2 Disagree / 3 Neither agree nor disagree / 4 Agree / 5 Completely agree	0.46	-2.18, -1.25, -0.41, 0.79	eb, fsdimm
marry4b	6	Do you think it should be LEGAL or ILLEGAL for homosexual couples to get married?	1 Legal, STRONGLY 2 Legal, SOMEWHAT 3 Illegal, SOMEWHAT 4 Illegal, STRONGLY 8 DK/No opinion 9 NA/Refused	0.84	0.40, 0.91, 1.95	abcwapo
approve5a	6	Homosexual relations are always wrong	1 strongly agree / 2 agree to some extent / 3 hard to say / 4 disagree to some extent / 5 strongly disagree	0.51	-1.24, -0.36, 1.06, 2.43	bsa, nzes
strength5	6	Strengthen the position of homosexuals, bisexuals and transsexuals in society	1 very good suggestion 2 pretty good suggestion 3 neither good nor bad suggestion 4 pretty bad suggestion 5 very bad suggestion	0.80	-0.35, 0.51, 2.70, 4.16	som
legal5	6	Homosexuals are no better than criminals and should be punished in the extreme	1 agree strongly / 2 agree / 3 neither agree nor disagree / 4 disagree / 5 disagree strongly	0.40	-1.95, -1.04, -0.39, 1.06	seessp
marry3a	5	Do you favour or oppose same-sex marriage, or do you have no opinion on this?	1 favor / 3 oppose / 8 no opinion	0.51	0.72, 2.25	canadianes

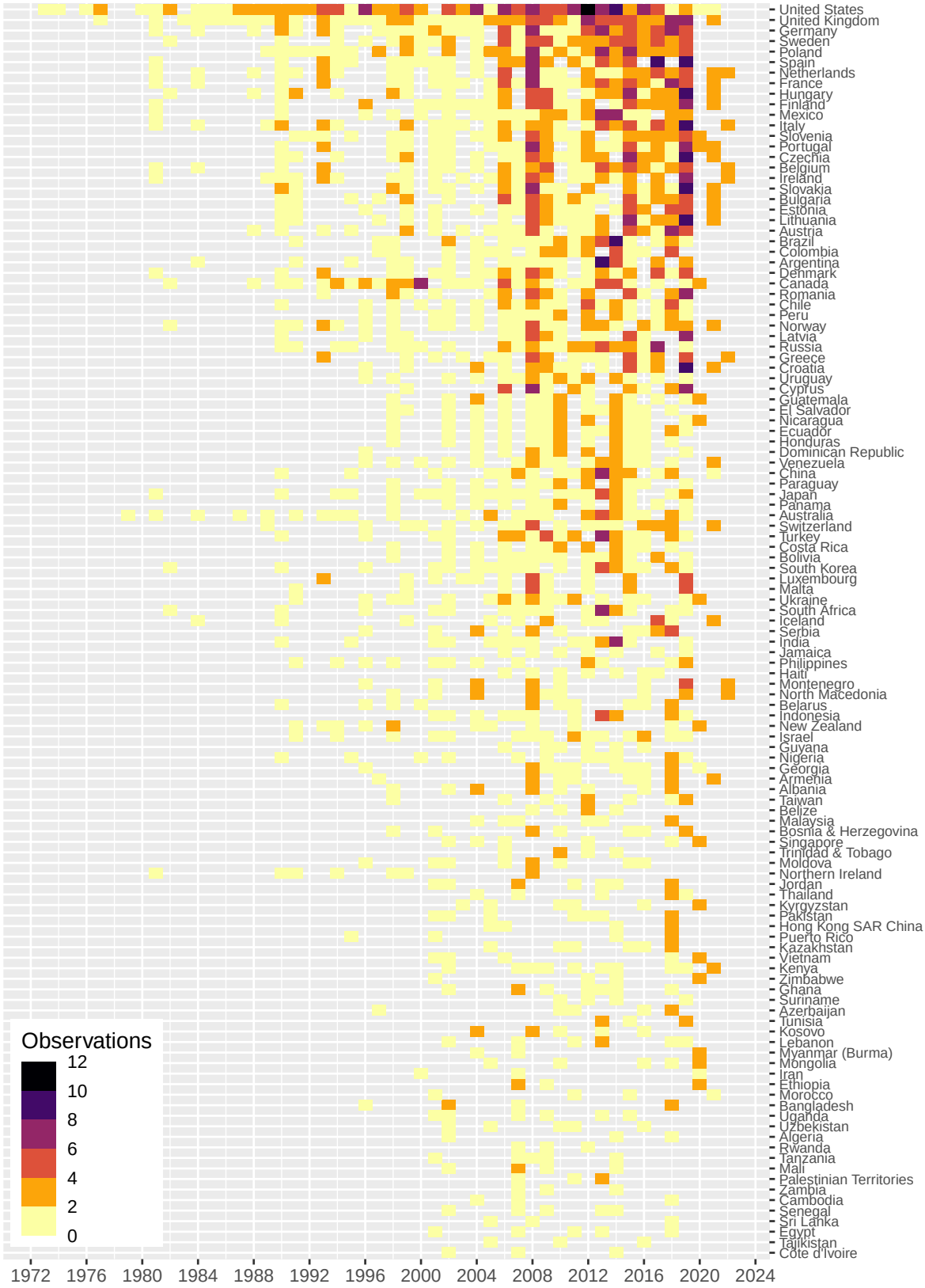

Figure A1: Source Data Observations by Country and Year