

**APPENDIX:
THE SECRET LIFE OF MORAL ISSUES**

Paul Goren and Christopher Chapp

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1. Overview of data sources and text retrieval strategies

Archive	Date collected	Coverage	Data source	Text retrieval strategy	Sample size + frequency
Newspaper article archive	2018 and 2023	1980-2022	NexusUni and US News-stream search of New York Times, Associated Press, and Washington Post Headlines	Used keywords to identify headlines for moral, taxes, and health care stories. Duplicates were removed. Obvious misclassifications (e.g. “Enola Gay”) were removed by hand.	119,636 news articles. Moral issues represent 38.1% of the sample.
Party platform archive	2020	1972-2020	American Presidency Project	Passages selected based on keyword search.	26 party platforms
Television Shows	2019 and 2023	1980-2022	IMDB plot summaries	Television show summaries were scraped from the IMDB. We used a broad keyword search to identify moral plotlines, and then trained coders to research and confirm that the plotlines contained moral issue content. We also supplemented this by examining trade publications and television blogs for mentions of moral issues, taxes, and health policy.	6,665 unique episodes from 111 different programs Moral issues present in 1.3% of all episodes and 35.1% of all programs
House Campaign Websites	2012 - 2022	2008 - 2022	Congressional Campaign Website Collection	Website content was scraped and archived. Webpages with moral policy content were identified using a keyword strategy.	54,686 unique issue statements from 6,154 campaigns Moral issues made up 6.3% of total

					issue statements, and were present in 35.9% of all campaigns
House Speeches	2015	1989 – 2014	Kathryn Pearson, University of Minnesota, One-Minute Speech Archive (compiled from the Congressional Record)	Speech content was scraped and archived. Speeches with moral policy content were identified using a keyword strategy.	56,574 speeches were archived; 2.1% had moral issue content
Political sermon archive	February 2020	2000 - 2020	SermonCentral.com	Data downloaded from SermonCentral.com using a keyword approach. Sample of sermons further refined using additional keywords	621 abortion sermons; 701 LGB sermons; 181 tax sermons; 64 health care sermons
Billboard archive	2014 - 2019	2014 - 2019 (selected MO, MN, and FL interstate highways)	The I-70 sign project; the Florida Department of Transportation; our own direct observation	Trained coders scored billboards for “moral issue” and “other political” content	2,086 FL billboards (1.4% moral); 304 MO billboards (2.3% moral); 470 MN billboards (4% moral)

2. Selected comparisons reported in chapter 3

Figure	Comparison	df	Difference	Test statistic	p-value (2-sided)
3.2	Moral issue articles after 1987 – Moral issue articles before 1987 (using monthly counts)	517	51.37	t=17.95	<.001
3.3	Mean moral episodes/year – mean health episodes/year	42	0.012	t=6.52	<.001
3.3	Mean moral episodes/year – mean tax episodes/year	42	0.012	t=5.97	<.001
3.4	%Republican moral pages – %Democratic moral pages (2008)	1	7.4	$\chi^2=5.41$	0.02
3.4	%Republican moral pages – %Democratic moral pages (2010)	1	20	$\chi^2=36.64$	<.001
3.4	%Republican moral pages – %Democratic moral pages (2012)	1	6.3	$\chi^2=3.44$	0.06
3.4	%Republican moral pages – %Democratic moral pages (2014)	1	-5	$\chi^2=2.19$	0.14
3.4	%Republican moral pages – %Democratic moral pages (2016)	1	-6.9	$\chi^2=3.83$	0.05
3.4	%Republican moral pages – %Democratic moral pages (2018)	1	-14.7	$\chi^2=16.61$	<.001
3.4	%Republican moral pages – %Democratic moral pages (2020)	1	-14.5	$\chi^2=17.04$	<.001
3.4	%Republican moral pages – %Democratic moral pages (2022)	1	-26.2	$\chi^2=54.27$	<.001
3.8	Anger in moral news – Anger in tax news	109,013	0.74	t=106.52	<.001
3.8	Anger in moral news – Anger in health news	55,850	0.78	t=57.52	<.001
3.8	Disgust in moral news – Disgust in tax news	109013	1.16	t=188.28	<.001
3.8	Disgust in moral news – Disgust in health news	55,850	1.07	86.1	<.001
3.9	Anger in Democratic moral issue pages – Anger in	28,430	0.70	t=16.14	<.001

	Democratic issue pages (overall)				
3.9	Disgust in Democratic moral issue pages – Disgust in Democratic issue pages (overall)	28,430	0.58	t=19.25	<.001
3.9	Anger in Republican moral issue pages – Anger in Republican issue pages (overall)	26,252	-0.20	t=-3.73	<.001
3.9	Disgust in Republican moral issue pages – Disgust in Republican issue pages (overall)	26,252	0.62	t=15.04	<.001
3.9	Anger in Democratic moral issue pages – Anger in Republican moral issue pages	3,432	0.70	t=12.13	<.001
3.9	Disgust in Republican moral issue pages – Disgust in Democratic moral issue pages	3,432	0.16	t=2.95	.003
3.10	Anger in moral statements from Democratic platforms – Anger in Democratic platforms (overall)	23	0.64	t=1.91	.07
3.10	Disgust in moral statements from Democratic platforms – Disgust in Democratic platforms (overall)	23	1.11	t=3.72	.001
3.10	Anger in moral statements from Republican platforms – Anger in Republican platforms (overall)	23	-0.11	t=0.457	.65
3.10	Disgust in moral statements from Republican platforms – Disgust in Republican platforms (overall)	23	1.77	t=10.53	<.001
3.11	Anger in Democratic moral issue speeches – Anger in other Democratic speeches	26,687	0.92	t=14.48	<.001
3.11	Disgust in Democratic moral issue speeches – Disgust in other Democratic speeches	26,687	0.79	t=17.53	<.001
3.11	Anger in Republican moral issue speeches – Anger in other Republican speeches	29,193	0.45	t=7.45	<.001

3.11	Disgust in Republican moral issue speeches – Disgust in other Republican speeches	29,193	0.95	t=21.56	<.001
3.11	Anger in Democratic moral issue speeches – Anger in Republican moral issue speeches	11,510	0.43	t=4.42	<.001
3.11	Disgust in Republican moral issue speeches – Disgust in Democratic moral issue speeches	1,151	0.19	t=2.25	.02
3.12	Anger in moral issue sermons – anger in tax/health sermons (combined)	1,564	0.52	t=7.96	<.001
3.12	Disgust in moral issue sermons – disgust in tax/health sermons (combined)	564	0.72	t=11.46	<.001

3. Data Collection and Coding Details

a. Newspaper article archive:

Date collected: Winter 2018 and August 2023

Coverage: January 1980 – December 2022

Data source: New York Times, Associated Press, Washington Post (Nexus Uni search and US Newsstream search)

Comparison group: We compare news articles with moral issue news content to articles on taxes and health care.

Keywords:

Moral issue words: Headline search for abortion, pro-life, pro-choice, gay, lesbian, homosexual

Tax issue words: Headline search for taxes

Healthcare issue words: Headline search for medicare, medicaid

Keyword rationale: We use keywords appearing in headlines to identify articles that prominently feature discussion of moral issues, taxes, and healthcare policy. This method was adopted over the full-text search we use for congressional speeches and websites because we only wanted to identify articles with extended discussion of these topics. For example, searching for the word “pro-life” in the full text of articles would lead to a number of articles that tangentially mention the abortion issue, but to not dedicate substantive attention to it. Previous research suggests that using headlines as such is a good proxy for identifying aggregate trends in newspaper coverage (Althaus, Edy, and Phalen 2001). For this reason, the data presented in Figure 3.2 is only based on headline content. However, headlines can miss the nuances of policy debate (Althaus, Edy, and Phalen 2001). For this reason, the framing analysis presented in Figure 3.8 analyzes the full text of articles identified using the headline approach.

Coding procedure: After sampling articles using the keyword approach described above, all coding was done using the NRC Emotion Lexicon (Mohammed and Turney 2013).

Reliability: We examined every news article in the sample individually, removing articles from the archive that were obviously misclassified. For example, we removed references to the Enola Gay and Olympic sprinter Tyson Gay. Beyond this, we did not make subjective judgments about inclusion in the sample (everything was included), so reliability statistics were not computed.

Representative examples:

“Bill Viewed as Anti-Gay Is Passed in Arizona.” The New York Times. February 21, 2014. <https://www.nytimes.com/2014/02/21/us/bill-viewed-as-anti-gay-is-passed-in-arizona.html>

“Lawsuit Says Compulsion Prevented Girl's Abortion.” The New York Times. September 25, 1995. <https://www.nytimes.com/1995/09/25/us/lawsuit-says-compulsion-prevented-girl-s-abortion.html>.

b. Party platform archive:

Date collected: December, 2020

Coverage: 1972 – 2020 (Note: the 2020 RNC datapoint replicates 2016, given that the party resolved “That any motion to amend the 2016 Platform or to adopt a new platform, including any motion to suspend the procedures that will allow doing so, will be ruled out of order.”)

Data source: The American Presidency Project, <https://www.presidency.ucsb.edu/>

Comparison group: We compare passages with moral issue content to the remainder of the party platform.

Keywords: abortion*, antiabortion, anti-abortion, reproductive, prochoice, pro-choice, pro choice, prolife, pro-life, pro life, late term, partial birth, right to choose, right-to-choose, impregnated, womb, infanticide, Roe v. Wade, Roe versus Wade, embryo*, fetal tissue, fetus, antichoice, Hyde amendment, Planned Parenthood, gay, lesbian, transgender, bisexual, homosexual, heterosexual, intersex, homoerotic, homo-erotic, homophob*, sodomy, gender identity, sexual identity, sexual orientation, traditional marriage, same-sex, same sex, DOMA, Defense of Marriage Act, Marriage Amendment, GLBT, LGBT, GLBTQ, LGBTQ, Don't Ask, Don't Tell

Keyword rationale: The vocabulary of moral issues has changed over time, and our sample of party platforms dates to 1972. For this reason, we include a long keyword list to ensure we are including all references to abortion and LGB rights.

Passage extraction procedure: There is no natural stopping and starting point for extracting passages from party platforms that deal with moral issues and distinguishing them from discussion of other issues. Sometimes, moral issue discussion might be a stand-alone platform plank. Other times, moral issues might be mixed in with other types of policy discussion. For example, “reproductive choice” might be included in a list of health services important for women. For this reason, we adopted the following rules to extract moral issue passages. First, if a keyword appeared as a platform subtitle (indicating a stand-alone plank), we sampled all the text included under that subtitle. Second, if a key word appeared in a sentence, we sampled that entire sentence. However, often a sentence might refer to a moral issue keyword by using a demonstrative or personal pronoun. For this reason, we follow the procedure from Chapp (2012), who recommends including all sentences that contain a demonstrative or personal pronoun that refers to the original keyword. In addition, if keywords appear in sentences separated by up to two non-keyword sentence, we include that sentence in the passage for continuity. Finally, if a keyword appears as part of a quotation, we include the entire quotation.

Reliability: We only report word count scores from the NRC Emotion Lexicon (Mohammed and Turney 2013), so inter-coder reliability statistics were not computed.

Representative examples:

“Today, the fundamental right of a woman to reproductive freedom rests on the votes of six members of the Supreme Court—five of whom are over 75. That right could easily disappear during a second Reagan term.” (Democratic Platform, 1984, <https://www.presidency.ucsb.edu/documents/1984-democratic-party-platform>).

“We endorse the First Amendment Defense Act, Republican legislation in the House and Senate which will bar government discrimination against individuals and businesses for acting on the belief that marriage is the union of one man and one woman. This Act would protect the non-profit tax status of faith-based adoption agencies, the accreditation of religious educational institutions, the grants and contracts of faith-based charities and small businesses, and the licensing of religious professions — all of which are under assault by elements of the Democratic Party.” (GOP Platform, 2016, <https://www.presidency.ucsb.edu/documents/2016-republican-party-platform>).

c. Congressional website archive:

Date collected: From 2014 – 2022, website data was scraped during the final three weeks of October in each election year. Data from 2008 – 2012 was retrieved in the summer of 2018.

Coverage: 2008 – 2022

Data source: Data from 2008 – 2012 was collected from two archiving resources. We primarily utilized the Library of Congress’s “United States Elections Web Archive” (<https://www.loc.gov/collections/united-states-elections-web-archive/about-this-collection/>). We are also indebted to the Oberlin College and Northwestern University Congressional Candidate Website Project (<https://www.archive-it.org/organizations/316>). From 2014 – 2020, all data was scraped from publicly available campaign websites. Campaign URLs are available upon request. Data includes every candidate home page, issues page (ranging from “the economy” to “traditional family”), and biography page. When copying text, we did not differentiate between issues listed on separate linked pages, or on a single page under separate subtitles. Regardless of how the candidate displayed their web content, each issue was archived as a separate .txt file.

Keywords: abortion*, antiabortion, anti-abortion, reproductive, prochoice, pro-choice, pro choice, prolife, pro-life, pro life, late term, partial birth, right to choose, right-to-choose, impregnated, womb, infanticide, Roe v. Wade, Roe versus Wade, embryo*, fetal tissue, fetus, antichoice, Hyde amendment, Planned Parenthood, gay, lesbian, transgender, bisexual, homosexual, heterosexual, intersex, homoerotic, homo-erotic, homophob*, sodomy, gender identity, sexual identity, sexual orientation, traditional marriage, same-sex, same sex, DOMA, Defense of Marriage Act, Marriage Amendment, GLBT, LGBT, GLBTQ, LGBTQ, Don't Ask, Don't Tell

Keyword rationale: Campaign websites typically have a separate page dedicated to individual issues. However, page titles are often poor indicators of page content (a page called “families” might be dedicated to moral issues, but it also might deal with education policy, family leave policy, et cetera). For this reason, we compiled an extensive list of keywords to identify page content. Because we wanted pages that contained substantial discussion of the issue, we only included pages when keywords met a specific frequency threshold.

Coding procedure: A page was scored as a moral issue if moral keywords accounted for 0.25 % of the total words on an issue page. We compare “moral” designated pages to all remaining issue content. While this is a small fraction of total words, most page scores were considerably higher. Moreover, even a small keyword score was sufficient to signal considerable moral issue policy discussion.

After sampling articles using the keyword approach described above, all coding was done using the NRC Emotion Lexicon (Mohammed and Turney 2013).

Reliability/Validity: Because human judgment did not enter into the process of identifying moral issue content, we did not compute traditional inter-rater agreement statistics. We did draw a sample of website passages to hand-code. We then compared hand-coded passages to our machine-coded text. Human judgments corresponded to our automated procedure for identifying

moral issue pages 96% of the time ($\kappa = 0.92$). Note that data from the 2022 campaign was not included in this reliability exercise.

Representative examples: We provide two representative examples of moral issue text. The first page, from Representative Pete Stark in 2008, had a keyword score that barely passed our 0.25 threshold for moral issue content. However, the issues page takes a clear stand on abortion and reproductive rights. We also reproduce a page with a keyword score of 2.56, which is close to the mean keyword score (2.26) across all moral issue pages. In other words, we reproduce examples of a page that barely made our cut, as well as an “average” or “typical” moral issue page.

[Pete Stark, CA-13, Democrat, 2008](https://web.archive.loc.gov/all/20081022185048/http://www.petestark.com/issues/women/women.html)

<https://web.archive.loc.gov/all/20081022185048/http://www.petestark.com/issues/women/women.html>

Pete Stark on Women's Issues

Pete Stark is unequivocal in his support for protecting women's reproductive health. It is a sad statement of the times and the willingness of the right wing to play political games with women's lives that the right to unbiased, scientifically accurate sex education; birth control; and compassionate, comprehensive care for rape victims is in jeopardy. Pete is working to enact legislation that would:

Require hospitals to provide the option of emergency contraception (also known as the “morning after” pill) to rape victims; require health insurance companies to provide coverage for prescription contraceptive drugs; require that federally funded sex education programs be medically accurate; and, require pharmacies to fill any legal prescription.

While these policies would greatly reduce the need for abortion, Pete believes that the decision to have an abortion should be made by the woman concerned -- not by anyone else, and certainly not by politicians. He opposes any government effort to limit a woman's freedom of choice to have or not have an abortion. For his commitment to economic and social justice, Pete consistently receives top ratings from the National Organization for Women, American Association of University Women, and the Children's Defense Fund. Pete supports legislation to ensure equal pay for equal work, efforts to strengthen child support enforcement, domestic violence prevention, and has written legislation to require that workers get paid during family and medical leave.

[Pete Olson, Texas-22, Republican, 2018](https://web.archive.org/web/20181017150327/https://www.olsonforcongress.com/issues/)

<https://web.archive.org/web/20181017150327/https://www.olsonforcongress.com/issues/>

Respecting the Sanctity of Life

I am pro-life.

I believe that life begins at conception and every life has a soul. Abortion as a means of birth control horrifies every fiber of my being. Our country should work to protect innocent life and I will vote that way in Congress as I did this year when I supported the defunding of Planned Parenthood. In the case of a mother's life being in danger I would understand abortion being necessary.

d. **Congressional One-Minute speech archive:**

Data source: These data were provided by Kathryn Pearson (University of Minnesota – Department of Political Science), who obtained House one-minute speeches from the *Congressional Record* and sorted and organized them by member. For additional methodological details, see Pearson and Dancey (2011).

Coverage: 1989 – 2014 (101st to the 113th Congress)

Keywords:

Moral issue words: abortion*, antiabortion, anti-abortion, reproductive, prochoice, pro-choice, pro choice, prolife, pro-life, pro life, late term, partial birth, right to choose, right-to-choose, impregnated, womb, infanticide, Roe v. Wade, Roe versus Wade, embryo, fetal tissue, fetus, antichoice, Hyde amendment, Planned Parenthood, gay, lesbian, transgender, bisexual, homosexual, heterosexual, intersex, homoerotic, homo-erotic, homophob*, sodomy, gender identity, sexual identity, sexual orientation, traditional marriage, same-sex, same sex, DOMA, Defense of Marriage Act, Marriage Amendment, GLBT, LGBT, GLBTQ, LGBTQ, Don't Ask, Don't Tell

Keyword rationale: Similar to websites, one-minute speeches are short in length and moral issue pages tended to be policy-focused. In pretesting, using a keyword list with policy terms proved to be a valid indicator of policy content.

Coding procedure: A page was scored as a moral issue if moral keywords accounted for 0.25 % of the total words in the speech. We compare “moral” designated speeches to all remaining speeches. While this is a small fraction of total words, most speeches were considerably higher. Moreover, even a small keyword score was sufficient to signal considerable moral issue policy discussion. After sampling articles using the keyword approach described above, all coding was done using the NRC Emotion Lexicon (Mohammed and Turney 2013).

e. **Political sermon archive:**

Date collected: February 2020

Coverage: October, 2000 – February 2020 (search included all sermons uploaded to the SermonCentral.com database at the time of data collection. The earliest sermon we retrieved with our search parameters was dated October 18, 2000).

Overview: Coding sermons for political issue content was more challenging than coding expressly political content, like campaign websites or one-minute speeches. A congressional site on “health” or “taxes” almost always signals a policy discussion with position-taking. However, sermons deploy the language of marriage, health, and taxes for a wide variety of reasons – many of which are completely apolitical. For example, sermons on taxes frequently referred to Zacchaeus the tax collector (Luke 19: 1- 10, *NIV*). Zacchaeus is typically sermonized to illustrate the power of faith, and to hold up Zacchaeus as an example of generosity. Zacchaeus is not typically mentioned to reflect on American tax policy. For this reason, we proceeded in two steps. We began with a broad set of search terms to sample from the SermonCentral.com database. This yielded a sample that included political sermons, but most sermons were false positives (like Zacchaeus sermons). Next, we narrowed this sample by requiring that all sampled work include a broader list of political terms at a relative frequency of .1. Our rationale was that policy advocacy or discussion should require a higher threshold of political terms. For example, we initially identified 2,994 sermons that used the word abortion. However, in order to make our final sample, the sermon needed to include the terms “pro life,” “pro choice” or “abortion” at a relative frequency of 0.1. This reduced the sample of abortion sermons from 2,995 to 621. Several rounds of pre-testing suggested that this two-step process did the best job of capturing authentically political sermonizing. Keywords and sample sizes are described below.

Keywords:

Abortion: Retrieved 2,994 sermons containing the word “abortion.” Reduced sample to 621 with a relative frequency approach (pro life, pro choice, abortion).

LGB: Retrieved 5,410 sermons using the words “homosexual” or “gay.” Reduced sample to 701 with a relative frequency approach (marriage, union).

Taxes: Retrieved 7,718 sermons containing the word “tax.” Reduced the sample to 181 with a relative frequency approach (taxation, tax cut, income, bracket).

Health: Retrieved 14,753 sermons using the word “health.” Reduced the sample to 64 with a relative frequency approach (healthcare, health care).

Reliability/Validity: We sampled 15% of selected samples to test whether our keyword approach was picking up “false positives” (sermons flagged as having issue content when none was present). Of the 220 sermons selected, 6 were incorrectly identified as issue-sermons. Every false positive was in the category of “tax sermon,” suggesting that, if anything, our estimates undercount the frequency of moral issue sermons relative to sermons that deal with taxation.

f. **Television program archive:**

Date collected: 2019 and 2023

Coverage: January 1980 – December 2022

Data source: Internet Movie Database episode summaries (<https://www.imdb.com/>)

Keywords:

Moral issue words: abortion*, antiabortion, anti-abortion, reproductive, prochoice, pro-choice, pro choice, prolife, pro-life, pro life, late term, partial birth, right to choose, right-to-choose, impregnated, womb, infanticide, Roe v. Wade, Roe versus Wade, embryo, fetal tissue, fetus, antichoice, Hyde amendment, Planned Parenthood, gay, lesbian, transgender, bisexual, homosexual, heterosexual, intersex, homoerotic, homo-erotic, homophob*, sodomy, gender identity, sexual identity, sexual orientation, traditional marriage, same-sex, same sex, DOMA, Defense of Marriage Act, Marriage Amendment, GLBT, LGBT, GLBTQ, LGBTQ, Don't Ask, Don't Tell, pregnant, pregnancy

Taxes: Tax

Healthcare: Health, healthcare

Keyword rationale: The most substantial difference between this keyword list and the keywords we used for congressional speeches and websites is the inclusion of the words “pregnant” and “pregnancy.” We made this change after discovering that in practice, IMDB plot summaries might mention that a character discovers that she is pregnant, with little further detail. In practice, these same episodes will often consider aborting their pregnancy, but this consideration is not mentioned in IMDB summaries. For this reason, we included “pregnancy” and “pregnant” as keywords as a strategy for flagging potential moral issue plotlines. Trained coders then researched flagged episodes to determine if abortion entered into the plot in a substantive way. Note that we also supplemented this by examining trade publications and television blogs for mentions of moral issues, taxes, and health policy.

Coding procedure: All plot descriptions are taken from IMDB with the exception of: *The Single Guy* (1995), *Union Square* (1997), *Boston Common* (1995), and *Leap of Faith* (2001). (These programs were missing from the IMDB, so we relied on other reputable plot summaries, such as TV Guide). Our approach to television program coding involved subjective judgments about what is and is not a “significant abortion or LGB plotline.” 248 shows for flagged for potential political content (abortion, LGB, healthcare policy, or tax policy) based on IMDB summaries. Coders began by re-reading IMDB summaries. If the summary warranted further investigation, asked to read additional summaries (TV Guide) and consult the ANISRH database. If this did not clarify, asked to investigate further, looking at critical commentary on the show or watching the episode itself. For example, perhaps the plot line specified “IRS.” This was not a word we used to flag television episodes, but it suggests a tax plotline. A coder might then research this show to determine if a plotline involved a major character being overburdened by taxes (indicating taxation as a plot feature), or if the character is simply applying for a job at the IRS, but taxes itself are not a plot focus (incidental mention). Coders were trained to distinguish

between “plot features” and “incidental mentions.” A plot feature would include a character who is gay and is concerned about social ramifications. It also includes shows where the word “gay” is used as a homophobic slur. An “incidental mention” might include a case where a character’s +1 at a wedding is same-sex, but no commentary is offered and this is not developed as a plotline.

Reliability: We had two coders examine each of the flagged articles to perform a reliability analysis. We also drew a sample of an additional 250 unflagged shows to ensure that IMDB plot summaries were an acceptable approach. Again, two coders were asked to research every show. While distinctions in the significance of moral plotlines may seem arbitrary and difficult to distinguish, in practice there is a bright line between an abortion or LGB plotline and an incidental mention. Coders reliably distinguished LGB programming (Intercoder agreement = 96.6%, Cohen’s kappa = 0.85). Because we oversampled moral issues for reliability coding, mentions of taxes and healthcare occur infrequently in the reliability subsample. Despite this, intercoder agreement was still high. For taxes, intercoder agreement was 99.2% and Cohen’s kappa was .746. For health care, intercoder agreement was 99.7% and Cohen’s kappa was 0.91. These intercoder reliability levels are quite high. This should not be surprising. Ultimately, coders were making determinations about content from short television show summaries that are intended to be unambiguous. We have no doubt that if we had the resources to ask coders watch the actual content of all popular programs dating back to 1980, there would be more disagreements about whether something ought to “count” as moral issues programming. While reliability would no doubt go down in this case, our approach is defensible as a conservative estimate of moral issues programming. We have no doubt that our approach misses a significant number of programs contained mentions of moral issues. The data we present in chapter 3 should be interpreted as a reliable “floor” rather than an unreliable “ceiling” for moral issues content on television.

Representative examples:

NCIS, Feb. 3, 2015. “We build, we fight”

When an openly-gay Navy Lieutenant who was about to be awarded the Medal of Honor is murdered, Gibbs and the team investigate. Meanwhile, Breena goes into labor.

https://www.imdb.com/title/tt4382126/?ref_=ttep_ep13 (Accessed 1/3/2022)

ER, September 27, 2001. “Four Corners”

Weaver returns to the emergency room after a self-imposed sabbatical of three weeks, wondering how her newfound lesbian identity will affect her workplace relationships. Having purposely allowed a mass murderer to die, Greene must keep the secret amidst the scrutiny of his superiors.

https://www.imdb.com/title/tt0567984/?ref_=ttep_ep1 (Accessed 1/3/2022)

g. Billboard archive:

Overview: There is little precedent for content analysis of billboards. There is also relatively little guidance for sampling billboard content, especially when billboard content changes on a monthly basis. For these reasons, the billboard data is a convenience sample. However, we did gather billboard content from three politically diverse regions, and when possible we randomized our sampling process.

Data sources: Data came from three sources. First, we obtained data from the I-70 Sign Show, an art installation maintained by Anne Thompson at Bennington College. (<http://www.i70signshow.org/database>). This project captured images of all billboards along I-70 between Kansas City and St. Louis. Images were captured between 2014 and 2016. Second, the state of Florida maintains an archive of all active billboards (<http://fdotewp1.dot.state.fl.us/rightofway/>). To our knowledge, Florida is the only state with a digital repository of images. Because billboards are stored as images, each billboard was coded by hand. Accordingly, we intentionally sampled interstates that bisect three diverse regions of the state, and then flipped a coin to choose which direction (e.g. northbound or southbound) we would code. Finally, we hired a team of student researchers to drive the I-35 corridor between Minneapolis and Duluth and code northbound and southbound billboards in real time.

Date collected: Missouri I-70 (2014 – 2017); Minnesota I-35 (December 2019); Florida I-75 North, I-10 East, I-95 North (April 2019)

Coding procedure: Trained coders were asked to identify billboards that either invoked moral issues or other political issue advocacy. Moral issues included any reference to abortion, prolife or prochoice position taking, LGB rights, political advocacy for a specific type of family structure (i.e. “one man, one woman”), or political advocacy for or against reproductive freedom. “Other issue advocacy” advocacy was any billboard that advocated for or against a particular policy position, or for or against a candidate for office. Coders were asked to distinguish commercial advertising from position-taking. For example, an advertisement for a gun store would not count as issue-advocacy, but advocacy from anti-gun group would count as issue-advocacy.

Reliability: We used two coders to improve reliability on the MN sample (the coders agreed on every classification, and in-practice found it relatively easy to distinguish moral issue advertising). For the MO billboards, we recoded the entire sample. Intercoder agreement on moral issue advertising was 99.6% (Cohen’s kappa = .921). Because the FL repository is constantly updated, we were unable to compute reliability statistics for this sample.

Representative examples: The photography below was taken by Ann Thompson as part of the I-70 Sign Show.



Chapter 4: Measurement Appendix

Panel Study Details:

Here, we describe the seven panel studies used in the book. To begin, the 1992-1996 National Election Study (NES) panel took place during the election seasons. Most interviews were in-person. The rest took place over the phone. There are 597 respondents in the 1992 pre/post-election waves and 1996 pre-election wave. The sample size drops to 545 in the post-election wave. Next, the 2000-2004 NES panel has 840 respondents. We also use the 2016-2020 NES panel. 2,839 web-based respondents were reinterviewed on the 2020 pre-election survey. This number drops to 2,670 for the post-election survey.

Next, we use data from the 2006-2010, 2008-2012, and 2010-2014 General Social Surveys (GSS).¹ The interviews took place in the spring and summer. Wave I interviews were face-to-face. Reinterviews happened over the phone. The first panel began with 2,000 respondents in 2006 and ended with 1,276 in 2010. The second panel started with 2,023 cases in 2008 and ended with 1,295 in 2012. The last panel started with 2,044 case and finished with 1,304. The response rate for the 2016-2020 NES equals 42%. It hovers around 70% for the other panels.

We also leverage data from the 2006-2012 Portrait of American Life Study (PALS). The PALS effort focuses on religion and daily living in the United States. In wave I, 2,610 respondents replied to questions in face-to-face interviews between April and October 2006. The wave I response rate is 58%. Reinterviews took place six years later between April and October

¹ Each GSS panel contains another wave of data at the two-year mark.

2012. Most respondents completed the second wave online, but some did so in person or over the phone. The sample size for the panel is 1,314 and the overall follow-up response rate is 51%.

We note that panel data analysis has some shortcomings. Panel attrition can undermine the representativeness of the sample (Bartels 1999). The use of different survey modes in the same panel and across different panels also raises concerns (Frankel and Hillygus 2014).

Our View on Random Measurement Error and Opinion Change

Some experts argue that a large share of the opinion change seen in panel surveys reflects random measurement error (RME), not genuine change in the latent attitude. What might lead subjects to give answers that randomly deviate from their underlying true attitudes? Various aspects of the interviewing process might introduce error (e.g., one misreads a survey question at time 1 but not time 2). There may also be problems with question wording (e.g., unlabeled response options make it hard to decide between adjacent points on a scale).

There are two solutions to minimize RME. The first is to use multiple questions to measure the underlying attitude. In so doing, random errors of measurement cancel out and one gets a better read on the underlying attitude. This is a standard best practice in measurement (Bollen 1989). We follow this advice and use multi-item scales to capture the underlying attitudes whenever possible.

The second solution for dealing with RME relies on specialized statistical techniques to purge it from the survey questions (e.g., errors-in-variables regression or structural equation modeling with latent variables). Statistical fixes like these have been employed with some regularity (e.g., Goren 2004). Despite their use in the literature, error corrections have proven controversial. Two objections stand out.

First, the estimates generated by these techniques often imply that latent attitudes and identities are nearly or completely stable (Achen 1975; Goren 2013). Take the seven-point party ID scale as an example. Researchers typically find that 15-25 percent of partisans/independents switch sides and nearly 50 percent adjust their identity strength (we find similar results in chapter 7). In the presence of this much change “it strains credulity to conclude that such large-scale variation in responses to straightforward questions about orientations toward highly salient entities such as political parties are largely, or wholly, a product of random measurement error” (Clarke and McCutcheon 2009, 711). At times, these techniques also point to the conclusion that people hold nearly or perfectly stable attitudes about political issues. For the reasons given in chapters 1-2, this also strains credulity.

Second, critics argue that RME in survey responses does not result primarily from either chance factors that intrude on the interviewing process or poorly worded questions. Instead, error exists because survey respondents do not hold fully crystallized identities and attitudes (Converse 1980; Luskin 1987; Zaller 1992, 2012; Kinder and Kalmoe 2017). This seems likely because error variance in survey responses is inversely related to how much people know about politics (Feldman 1989) and political ignorance is very widespread in the mass public (Delli Carpini and Keeter 1996).

The Validity and Reliability of the Moral Issue Items and Scales

Are the abortion and gay rights opinion items listed above valid and reliable indicators of the underlying attitudes? We use confirmatory factor analyses (CFA) and reliability analyses to answer these questions. These are statistical tools scholars use to assess questions like this. To investigate, we turn to data from the 2006, 2008, 2010, 2012, and 2014 GSS cross-sectional

surveys. Since the GSS surveys have the largest number of measures and feature more heavily in the book, it makes sense to assess the measurement properties of these items.

If opinions about abortion and gay rights spring from the same attitudinal dispositions, then the reported opinions should be moderately to highly correlated. For example, people who oppose abortion when the woman's health is endangered should generally oppose abortion if there is a chance for a serious birth defect. Conversely, people who favor abortion in one scenario should usually favor it in the second. As well, pro-life respondents should be more apt to oppose gay marriage compared to pro-choice respondents. And so on. To assess attitude consistency, we calculate correlation coefficients. Correlations estimate the direction and strength of the linear relationship between two variables. They vary between -1.00 and +1.00. If people respond in a consistent manner to abortion and gay rights items, we should observe moderate to high correlations.

With nine GSS items, we can calculate 36 pairwise correlations. To keep things simple, we follow Cook et al. (1992) by combing combinations of the seven abortion items into two mini-scales. We construct a simple additive scale of traumatic abortions using the "woman's health", "rape", "serious defect" items and a second scale for elective abortions based on the "any reason", "does not want more children", "low income", and "doesn't want to marry the man" items. This cuts down the number of correlations from 36 to 6. Because these are ordinal measures, we calculated polychoric correlations. These are appropriate for ordinal data (Bollen 1989). Using the 2010 GSS cross-section as an example, we found positive, significant, and robust correlations across the board. To take one result, the correlation between traumatic and elective abortions equals 0.86. The correlation between homosexual relations and gay marriage is 0.78. All other correlations range from 0.46 to 0.57.

Overall, the mean correlation equals 0.62. Per the usual standards, these are impressive results. Parallel results emerge when we examine the other GSS surveys. The results suggest that people respond to the abortion and gay right items in a consistent manner. Some people consistently take traditional positions on these issues. Others consistently adopt progressive positions. This is precisely what we would expect if responses to the items derive from the same attitudinal source.

The correlation analyses reveal that people give consistently progressive or traditional answers to questions about abortion and gay rights. The implication is that the opinions people report derive from meaningful underlying attitudes. We can test this hypothesis using a statistical technique called confirmatory factor analysis (CFA). The goal is to determine whether a small number of unobservable (latent) factors explain patterns of covariation among a larger set of observable variables. If a single underlying attitude guides the question-answering process, the statistical evidence will point to a one-factor solution. If the abortion items and gay rights items derive from separate attitudinal dimensions, the evidence will point to a two-factor solution. Under the latter scenario, the inter-factor correlation should be high. If these correlations are sufficiently high, then a second-order factor should account for the correlation between the two lower order factors. A one-factor solution or a second-order solution will provide evidence that the opinions derive from the same latent source.

There are different estimators to choose from. We use the robust unweighted least squares (ULS) estimator for categorical data. Simulation studies report that this estimator works well in the presence of non-normal, categorical data (Forero, Maydeu-Olivares, and Gallardo-Pujol 2009; Rhemtulla, Brosseau-Liard and Savalei 2012).

Initial efforts to fit a one-factor model resulted in subpar model fit in every sample. We then specified a two-factor model, which fit the data exceedingly well. Since the inter-factor correlations were high, we respecified the model as a second-order factor model. The first level is a two-factor model in which the two abortion items load on one factor and the gay items load on a second. There are no cross-factor loadings. These factors then load onto a second, higher order factor.² This second-order factor corresponds to the moral issues disposition.

Table A4.1 reports the CFA estimates from the five GSS data sets. The model fits the data very well. The Satorra-Bentler chi-square tests the null hypothesis that the population variance-covariance matrix equals the model generated variance-covariance matrix. We want a statistically insignificant result because it suggests the specified model holds in the population (Bollen 1989). In every GSS data set, we do not reject the null hypothesis. Table A4.1 reports two descriptive measures of global model fit—the standardized root mean square residual (SRMR) and the root mean square error of approximation (RMSEA). Per one set of published cutoff criteria, model fit is outstanding (Hu and Bentler 1999).

We turn now to the factor loadings. If latent attitudes guide responses to these items, all loadings should be statistically significant and substantively powerful. This is precisely what we find. At level one, the average standardized loading for the traumatic and elective abortion scales equal 0.91 and 0.92, respectively. The average loadings for the same-sex relations are wrong and gay marriage items are also very high at 0.94 and 0.85, respectively. At level-two, the average standardized loading of latent abortion on latent moral attitudes equals 0.80. The average for latent gay rights is 0.78.

² We employed the EQS program (version 6.4) to estimate the models. To identify each model, we constrain the second-order loadings to be equal and the variance of the second order factor to equal 1.00.

Table A4.1: Confirmatory Factor Analysis Models for Moral Issues, GSS Data

	2006	2008	2010	2012	2014
ξ_1 Abortion					
λ_1 Traumatic abortions	1.00 .92	1.00 .95	1.00 .92	1.00 .88	1.00 .90
λ_2 Elective abortions	1.003 .92	0.94 .89	0.99 .91	1.07 .95	1.04 .93
ξ_2 Gay rights					
λ_3 Homosexuality wrong	1.00 .96	1.00 .95	1.00 .93	1.00 .92	1.00 .93
λ_4 Gay marriage	0.84 .81	0.89 .84	0.89 .82	0.95 .88	0.98 .91
ξ_3 2 nd Order factor					
λ_5 Abortion	0.73 .81	0.77 .81	0.73 .80	0.73 .82	0.71 .79
λ_6 Gay rights	0.73 .76	0.77 .81	0.73 .79	0.73 .79	0.71 .76
Model fit:					
Satorra-Bentler corrected $\chi^2 / 1$ df	0.34	0.0002	0.03	0.02	0.02
χ^2 <i>p</i> value	0.56	0.99	0.87	0.89	0.88
SRMR	0.002	0.000	0.001	0.001	.001
RMSEA	0.07	0.000	0.000	0.000	.000
Number of observations	1,704	1,113	1,067	1,055	1,456

Notes: Robust categorical least squares estimates are based on polychoric correlations. Unstandardized factor loadings reported, with standardized loadings in parentheses. All parameter estimates are significant at $p < .01$; SRMR = standardized root mean squared residual. RMSEA = root mean square error of approximation.
Source: Cross-sectional General Social Surveys.

Accurate measurement occurs when the indicators operationalizing a latent concept prove valid and reliable. We have shown that the opinion items at our disposal are valid—that is, they measure the attitudes they are supposed to measure. We now examine the degree to which these items are reliable—that is, the extent to which they yield consistent responses across repeated applications. When reliability is high, there is little random measurement error across the items. Conversely, when reliability is low, random measurement error contaminates the items.

We report the reliability of simple additive scales made up of the items in a given survey as listed above in the question wording section. We calculate two estimates. First, we use ordinal alpha for ordinal data (Zumbo, Gadermann, and Zeisser 2007). Second, we calculate the Cronbach alpha coefficient, which is appropriate for interval-level data (Bollen 1989).³ We use both estimates because we are working with data at both levels of measurement. As it turns out, the different formulae return similar results.

Alpha coefficients summarize the proportion of variance in a multi-item scale explained by the latent attitude. Alpha varies from 0.00 to 1.00. When alpha is high, the underlying attitude guides opinion responses. High values reflect crystallized attitudes. When alpha is low, opinions are awash in random measurement error. Low values denote uncrystallized attitudes (Converse 1970). Values of 0.70 or higher are acceptable, values of 0.80 are good, and values of 0.90 or more are excellent (Cortina 1993; Taber 2017).

Table A4.2 lists the reliability coefficients for each scale in each sample. The samples come from the first wave in each panel study. The top row reports the ordinal alphas. The middle

³ For two variables measured at the ordinal level, we use polychoric correlations. If one variable is measured at the ordinal level and another at the interval level, polyserial correlations go into the alpha calculation.

row reports the Cronbach alphas. The bottom row shows the number of items used to construct a given scale.

Table A4.2: Reliability Coefficients for Each Moral Issues Scale

	1992 NES	2000 NES	2016 NES	2006 GSS	2008 GSS	2010 GSS	2006 PALS	Avg. alpha
Ordinal alpha	.78	.63	.82	.96	.96	.96	.70	.83
Cronbach's alpha	.73	.56	.73	.89	.89	.89	.59	.75
(Number of items)	(4)	(3)	(4)	(9)	(9)	(9)	(4)	

Source: Cross-sectional surveys.

To illustrate, the 1992 NES scale contains four questions—one on abortion and three on gays/gay rights. The ordinal and Cronbach alphas for the scale are 0.78 and 0.73, respectively. These estimates reveal that latent feelings about moral issues explain about 75% of the variance in responses to the four survey questions. The remaining 25% of the variance reflects random measurement error. These are reasonable values for a four-item scale. Now consider the nine-item GSS scales, which combine answers to seven abortion and two gay rights items. Across the three panels, ordinal alpha averages 0.96 and Cronbach alpha averages 0.89. The GSS estimates reveal that latent issue attitudes explain 89-96% of the variance observed in the items—exceptionally high values.

The alpha values are fine with three exceptions. First, the values for the three-item scale in the 2000 NES fall below the recommended cutoffs. This is true for ordinal alpha (0.63) and Cronbach's alpha (0.56). Second, the Cronbach alpha for the four-item PALS scales is also lower than desirable (0.59). But overall, 13 of the 16 estimates meet or exceed the 0.70 threshold. Across all estimates, the ordinal alpha averages 0.84. The Cronbach alpha averages 0.78. The

reliability estimates support the conclusion that people hold crystallized feelings about the core issues that define America's culture war.

Overall, the CFA and reliability estimates suggest that attitudes toward abortion and gay rights derive from separate but closely related attitudes that in turn depend on a higher order disposition. In light of this, we combine all items into simple additive scales throughout the remainder of the book. We justify this decision for two reasons. First, people who hold morally conservative views on abortion typically manifest some opposition to gay rights. Likewise, pro-choice positions are associated with pro-gay rights positions. Second, a single moral issues scale is more parsimonious than separate abortion and gay rights scales. In short, our decision to combine all items into simple additive scales seems reasonable.

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