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Sydney Cohen April 9, 2025

The Politics of Timing:
Extracting New Meaning from Public Opinion Data on Abortion

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Abstract

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By Sydney Cohen

This paper builds on previous research assessing the congruence between public opinion and abortion policy, and specifically asks if attitudes on abortion timing, a new feature of the debate, are being captured by surveys. Two widely administered public opinion surveys, the General Social Survey (GSS) and American National Election Studies (ANES), ask abortion questions that do not have a timing dimension. To measure the timing assumptions made when respondents answer these questions, I created a survey that asked the GSS and ANES question along with a question that asks for abortion timing cutoffs in weeks. The results reveal correlations between certain GSS/ANES responses and gestational timing, and create crosswalks between the three question types.

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Introduction

In December 2021, the Supreme Court of the United States argued the constitutionality of a Mississippi law banning nearly all abortions after 15 weeks gestational age[1]. The case—*Dobbs v. Jackson Womens' Health Organization* (2022)—was decided the following June, and ultimately overturned the constitutional right to abortion established by *Roe v. Wade* (1973) and *Planned Parenthood v. Casey* (1992). The aftermath of this decision was immediate action against abortion access by state legislatures; 13 states had already passed abortion "trigger bans" that took effect immediately after the decision[2]. As of October 2024, 13 states still have total abortion bans, while 28 states have abortion bans based on gestational length[3].

With the recent uptick in state abortion bans and the long—and now successful—battle to overturn *Roe v. Wade*, it may seem like much of the U.S. public has grown opposed to abortion. However, despite these policy changes, abortion attitudes have remained relatively stable over time. Annually distributed polls like the General Social Survey have demonstrated little change in aggregate abortion opinions in the last 50 years, indicating that Americans have disagreed about abortion legality to approximately the same degree since 1972[4]. In fact, recent polls

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[1] Oyez. "Dobbs v. Jackson Women's Health Organization," n.d. https://www.oyez.org/cases/2021/19-1392.

[2] Dube, Nicole, and James Orlando. "State Abortion Laws Enacted Post-Dobbs Decision." *Connecticut General Assembly Office of Legislative Research*, September 2022.

[3] Guttmacher Institute. "State Bans on Abortion Throughout Pregnancy," March 2025.

[4] Jelen, Ted G, and Clyde Wilcox. "Causes and Consequences of Public Attitudes Toward Abortion: A Review and Research Agenda." Long Beach, CA, 2003; Cowan, Sarah K., Michael Hout, and Stuart Perrett. "Updating a Time-Series of Survey Questions: The Case of Abortion Attitudes in the General Social Survey." *Sociological Methods & Research* 53, no. 1 (February 2024): 193–234. https://doi.org/10.1177/00491241211043140.

indicate that Americans are leaning towards more permissive abortion views; in 2024, as much as 63% of the population believes abortion should be legal in all or most situations[5].

If more than half of Americans are in favor of abortion in at least some situations, and aggregate U.S. abortion attitudes have stayed relatively constant since the 1970s, why are we seeing such a rise in anti-abortion legislation today? Could this signify incongruence between abortion policy and public opinion, and if so, how was the Pro-Life movement able to overturn *Roe v. Wade* and pass numerous bans and restrictions without popular support? Maybe more people support timing-based restrictions than current polls suggest, or public opinion has little to no effect on policy. Perhaps the relationship is reversed, and policies drive the formation of opinions.

A Brief History

The answer to many of these questions lies in the history of abortion's politicization. Before the 1980s, abortion was largely a nonpartisan issue. Though some individuals and religious groups possessed conservative anti-abortion views before this time, abortion remained absent from the major parties' platforms[6]. In fact, up until the late 1980s, Republicans were typically more pro-choice than Democrats[7]. This began to change in 1973 after the *Roe v. Wade* decision launched abortion into political discourse at the federal level. The case established the constitutional right to abortion based on the right to privacy, and also laid out the pregnancy

[5] Pew Research Center. "Public Opinion on Abortion," May 2024. https://www.pewresearch.org/religion/fact-sheet/public-opinion-on-abortion/.

[6] O'Brian, Neil A. "Before Reagan: The Development of Abortion's Partisan Divide." *Perspectives on Politics* 18, no. 4 (December 2020): 1031–47. https://doi.org/10.1017/S1537592719003840.

[7] Adams, Greg D. "Abortion: Evidence of an Issue Evolution." *American Journal of Political Science* 41, no. 3 (July 1997): 718. https://doi.org/10.2307/2111673.

trimester system used today[8]. Many Americans opposed the decision, and to appeal to conservative voters, the Republican Party quickly incorporated the pro-life stance in their platform. The Republican Party was also pressured to politicize abortion by party members from the Christian Right, as well as by Ronald Reagan's strong anti-abortion platform during his presidency[9].

During this time, the Democrat and Republican parties developed opposing, highly polarized stances surrounding abortion. The debate centered on the legality of abortion on the federal level, as many voters were unhappy with the Supreme Court's *Roe* decision. More specifically, disagreement revolved around the specific circumstances when abortion should be an option, such as when the mother's health is endangered, or when there are birth defects [10]. It was during this period—-specifically, in 1972—that leading public opinion questionnaires General Social Survey (GSS) and American National Election Studies (ANES) first asked questions about abortion. We will examine these questions in greater detail later in the paper.

Although federal events in the 1970s may have been catalysts for the American abortion debate, the discourse we see today has expanded greatly from the mere legality of abortion. The modern debate has incorporated new considerations—which will be outlined in the following section—that were not in the conversation when polling organizations began to measure public opinion on abortion. The longstanding GSS and ANES abortion questions, therefore, may be

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[8] Lu, Yi. "Roe v. Wade Overturned: Public Opinion on Abortion." *Journal of Education, Humanities, and Social Sciences* 6 (2022): 50–55; Oyez. "Roe v. Wade," n.d. www.oyez.org/cases/1971/70-18.

[9] Wilson, Joshua C. "Striving to Rollback or Protect Roe: State Legislation and the Trump-Era Politics of Abortion." *Publius: The Journal of Federalism* 50, no. 3 (July 1, 2020): 370–97. https://doi.org/10.1093/publius/pjaa015; Daynes, Byron W, and Raymond Tatalovich. "Presidential Politics and Abortion, 1972-1988." *Presidential Studies Quarterly* 22, no. 3 (1992): 545–61.

[10] Cowan, Sarah K., Michael Hout, and Stuart Perrett. "Updating a Time-Series of Survey Questions: The Case of Abortion Attitudes in the General Social Survey." *Sociological Methods & Research* 53, no. 1 (February 2024): 193–234. https://doi.org/10.1177/00491241211043140.

unfit to capture current subtle variations in abortion attitudes. However, they remain leading sources of attitudinal data for policy makers and researchers across the country. Because abortion has maintained its preeminence as a morally-clung to and contentious political issue, it is essential that we examine common methods of measuring abortion attitudes. If these methods prove outdated, we must revise them in order to properly assess congruence between abortion policy and peoples' preferences. The intricacies of Americans' abortion preferences deserve to be recognized and reflected in politics, as women's bodily autonomies (and sometimes lives) are on the line.

The New Abortion Debate

In the 2020s, abortion remains politically divisive. As many scholars describe it, no other moral issue represents U.S. social conflict as vividly as abortion, the struggle over which has become representative of the "culture wars" between major parties[11]. However, current conversations about abortion access are quite different from those of the 1980s. Ever since *Dobbs v. Jackson Womens' Health Organization* in 2022, state governments—opposed to federal—have possessed full authority to regulate abortion access[12]. As a result, modern debates revolve around the constitutionality of state abortion bans and other state laws limiting abortion access—such as those limiting insurance coverage, mandating counseling and waiting periods, or requiring abortion clinics and their providers to meet specific standards[13].

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[11] DiMaggio, Paul, John Evans, and Bethany Bryson. "Have Americans' Social Attitudes Become More Polarized?" *American Journal of Sociology* 102, no. 3 (November 1996): 690–755. https://doi.org/10.1086/230995; Alfonseca, Kiara. "Culture Wars: How Identity Became the Center of Politics in America." *ABC News*, July 2023. https://abcnews.go.com/US/culture-wars-identity-center-politics-america/story?id=100768380.

[12] Lu, Yi. "Roe v. Wade Overturned: Public Opinion on Abortion." *Journal of Education, Humanities, and Social Sciences* 6 (2022): 50–55.

[13] Nash, Elizabeth. "Abortion Rights in Peril — What Clinicians Need to Know." *The New England Journal of Medicine*, August 2019, 497–99.

An overarching feature of the modern abortion debate concerns timing. Many state laws regulate abortion access based on gestational length, whether this be in weeks, months, or trimesters. In 2019, an unprecedented number of bans based on gestational age were signed into law, including bans at 6 weeks of gestation in Louisiana, Georgia, Kentucky, Mississippi, and Ohio; at 8 weeks in Missouri; and at 18 weeks in Arkansas and Utah[14]. The increase in timing-based abortion bans stem from recent disagreements over "fetal viability", or the point at which a fetus could survive outside the uterus. These bans make abortion inaccessible very early into pregnancy and are not based on uniform statements from medical professionals[15].

We now return to the original question: why are we seeing such incongruence between current abortion policy and public opinion? Does the average American really support outlawing abortion zero, six, eight, or twelve weeks after a woman's last menstrual period? Or might there be some middle ground in opinions that is not being captured by current public opinion questionnaires?

As mentioned before, timing-based regulations were not part of the conversation when abortion legality was still in the hands of the federal government. This was reflected in the abortion questions of the General Social Survey and American National Election Studies written in 1965 and and 1972, respectively[16]. The GSS includes a 6-question "Rossi scale" which asks respondents to respond yes or no if abortion should be permissible in 6 circumstances relating to

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[14] Nash, Elizabeth. "Abortion Rights in Peril — What Clinicians Need to Know." *The New England Journal of Medicine*, August 2019, 497–99.

[15] Pettker, Christian. "The Limits of Viability." *Obstetrics and Gynecology* 142, no. 3 (September 2023): 725–26. https://doi.org/10.1136/bmj.s1-2.24.473.

[16] Cowan, Sarah K., Michael Hout, and Stuart Perrett. "Updating a Time-Series of Survey Questions: The Case of Abortion Attitudes in the General Social Survey." *Sociological Methods & Research* 53, no. 1 (February 2024): 193–234. https://doi.org/10.1177/00491241211043140; O'Brian, Neil A. "Before Reagan: The Development of Abortion's Partisan Divide." *Perspectives on Politics* 18, no. 4 (December 2020): 1031–47. https://doi.org/10.1017/S1537592719003840.

fetal defects, the woman's wishes for more children, the woman's health, woman's income, rape, and the woman's marital status—the 7th, "for any reason" question was added later and its responses are difficult to interpret. The ANES, on the other hand, includes a single, 4-option multiple choice question that asks respondents to choose the circumstances when abortion should be legal[17]. The exact wording and formatting of the two questions are shown below:

ANES question
There has been some discussion about abortion during recent years. Which one of the opinions on this page best agrees with your view? You can just tell me the number of the opinion you choose. 1. By law, abortion should never be permitted. 2. The law should permit abortion only in case of rape, incest, or when the woman's life is in danger. 3. The law should permit abortion for reasons other than rape, incest, or danger to the woman's life, but only after the need for the abortion has been clearly established. 4. By law, a woman should always be able to obtain an abortion as a matter of personal choice. 5. Other [SPECIFY]
GSS "Rossi scale" questions

[17] Cook, Elizabeth. "Measuring Public Attitudes on Abortion: Methodological and Substantive Considerations." *Family Planning Perspectives* 25, no. 3 (1993). https://pubmed.ncbi.nlm.nih.gov/8354376/; Cowan, Sarah K., Michael Hout, and Stuart Perrett. "Updating a Time-Series of Survey Questions: The Case of Abortion Attitudes in the General Social Survey." *Sociological Methods & Research* 53, no. 1 (February 2024): 193–234. https://doi.org/10.1177/00491241211043140.

Please tell me whether or not you think it should be possible for a pregnant woman to obtain a legal abortion if . . .

1. There is a strong chance of serious defect in the baby?
2. She is married and does not want any more children?
3. The woman's own health is seriously endangered by the pregnancy?
4. The family has a very low income and cannot afford any more children?
5. She became pregnant as a result of rape?
6. She is not married and does not want to marry the man?
7. The woman wants it for any reason?

Table 1. ANES and GSS abortion questions. Adapted from Zigerell 2012[18]

Although the overall legality of abortion and the circumstances under which it should be allowed are still on the table, the federal to state transition has introduced new topics and terminology to the modern abortion debate that are not reflected in these questions. Specifically, there is no mention of timing, which has become the basis of much state legislation. Yet in 2024, we rely on these same GSS and ANES questions to gauge public opinion on abortion. As posited by Cowan (2024), "when the terms of the debate change, [we must] change the questions to include new terms… If measures get too far out of sync with the public discussion, then surveys may miss or miscast changes in opinion"(p.195).

Literature review

Many scholars have questioned the ability of public opinion surveys to capture attitudes about abortion. Due to their large sample and consistently asked questions, the General Social

[18] Zigerell, L.J. "The New 2006 and 2008 ANES Abortion Attitude Measures." In *Improving Public Opinion Surveys*, 303–21. Princeton University Press, 2012.

Survey and American National Election Studies are the main surveys explored in this literature. Scholars have uncovered various flaws in the GSS and ANES abortion questions that can be summed up into the following categories: ambiguity, lack of complexity, and outdatedness.

Starting with ambiguity, many scholars argue that the wordings of the GSS and ANES questions are inexact and open to individual interpretation. For example, Zigerall (2012) criticizes the ambiguity of the third ANES response option, which they believe is unclear in the nature of "the need for the abortion" and the manner in which this need is "clearly established". Though this may seem a bit nit-picky, the field of survey research strongly warns against ambiguity in question wording, as this can bias results by leaving questions open to interpretation[19]. Bumpass (1997) empirically tested the role of abortion question wording by administering a modified General Social Survey. They found no significant effect of question ambiguity on measured abortion attitudes. However, their results did demonstrate that the order of questions can "prime" certain responses and affect attitude measurement. Though variations in wording do matter, research has demonstrated that abortion attitudes stay relatively consistent across different measurement strategies[20].

Beyond question language, many scholars claim that public opinion surveys produce exaggerated absolutism in responses. That is, the questions may not be specific enough to capture middle-ground abortion attitudes—for instance, approval of abortion in some situations and not others—and push respondents towards "pro-choice" and "pro-life" extremes. This is

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[19] Elson, Malte. "Question Wording and Item Formulation." In *International Encyclopedia of Communication Research Methods*. 1-9: John Wiley & Sons, Inc., 2017; Fowler, Floyd Jackson Junior. "How Unclear Terms Affect Survey Data." *Public Opinion Quarterly* 36 (1992): 218–31.

[20] Cook, Elizabeth. "Measuring Public Attitudes on Abortion: Methodological and Substantive Considerations." *Family Planning Perspectives* 25, no. 3 (1993). https://pubmed.ncbi.nlm.nih.gov/8354376/; Jelen, Ted G, and Clyde Wilcox. "Causes and Consequences of Public Attitudes Toward Abortion: A Review and Research Agenda." Long Beach, CA, 2003.

evidenced by the results of Cook (1993), which find that general questions that allow for only 2 to 3 response options tend to produce all-or-nothing responses. Cook explains this finding with the idea that people pick the answer choice closest to their position when given limited responses options. If this is the case, there may be substantially more middle ground on the abortion issue than GSS and ANES data would suggest—especially on the ANES, which only allows respondents to pick a single answer choice.

Jozkowski (2018) also believes that people's beliefs regarding abortion are too complex for dichotomous (pro or against) answer choices. Surprisingly, they find that lower abortion permissiveness is associated with higher attitudinal complexity. In other words, people more opposed to abortion (and typically labeled "pro-life") are more likely to have attitudes that vary based on the woman's individual circumstances. Their follow-up study in 2020 finds that increased attitudinal complexity is also associated with Republican and Christian-identifying respondents. This finding provides hope for compromise regarding access to safe, legal abortion, and suggests that people can change their minds when provided with new information[21].

The lack of incremental response options in GSS and ANES questions is not the only reason the measures lack complexity. Hans and Kimberly (2014) used an adaptive vignette study to test the theory that people's abortion attitudes, like the reasons people seek abortion, are complex and situation-dependent[22]. That is, people may change their abortion attitudes on a case-by-case basis depending on the individual circumstances, such as the woman's health

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[21] Jozkowski, Kristen N., Xiana Bueno, Kathryn LaRoche, Brandon L. Crawford, Ronna C. Turner, and Wen‐Juo Lo. "Participant‐driven Salient Beliefs Regarding Abortion: Implications for Abortion Attitude Measurement." *Social Science Quarterly* 105, no. 2 (March 2020): 374–91. https://doi.org/10.1111/ssqu.13343; Jozkowski, Kristen N., Brandon L. Crawford, and Mary E. Hunt. "Complexity in Attitudes Toward Abortion Access: Results from Two Studies." *Sexuality Research and Social Policy* 15, no. 4 (December 1, 2018): 464–82. https://doi.org/10.1007/s13178-018-0322-4.

[22] Biggs, M Antonia, Heather Gould, and Diana Greene Foster. "Understanding Why Women Seek Abortions in the US." *BMC Women's Health* 13, no. 1 (December 2013): 29. https://doi.org/10.1186/1472-6874-13-29.

conditions, socioeconomic status, age, or relationship status. They measured participant attitudes by asking whether or not they think abortion should be available to the character following a description of each vignette situation. They also asked participants how strongly they felt about each response. In line with their predictions, results showed that 38% of the respondents who strongly opposed abortion after the first vignette changed their responses after information about the woman's health was presented. Hans and Kimberly conclude that survey questions lacking relevant contextual information are therefore invalid and allow people to assume certain circumstances. Though it is difficult (and sometimes impossible) to provide all context possible when designing a survey question on abortion, Hans and Kimberlys' findings suggest that public opinion on abortion may not be as rigid as is often thought.

Theory

Finally—and most relevant to the present investigation—scholars have found fault with the lack of a timing dimension in abortion questions. Due to the rise in gestational length-based restrictions, timing has become a critical element of the modern abortion debate. Many patients and medical professionals divide the 9 months of pregnancy into 3 trimesters containing characteristic fetal and maternal changes. Since the decision of 1973 *Roe v. Wade*, the trimester framework has been used to determine when state laws can and cannot regulate abortion. For instance, before *Roe's* overturn in 2022, states were prohibited from regulating abortion during the first trimester[23]. However, the trimester system is not a flawless measurement system. Because pregnancy lengths are variable and do not always divide evenly into 3 segments, many

[23] Oyez. "Roe v. Wade," n.d. www.oyez.org/cases/1971/70-18.

obstetricians prefer to use more precise measurement intervals such as weeks to track development[24].

Because of the ties between abortion policy and gestational length, people may be more permissive of abortion earlier on into a pregnancy. This could have dramatic implications for abortion access, given that about 90% of abortions occur during the first 13 weeks of gestation[25] . However, the current GSS and ANES questions cannot differentiate between people's timing-based policy preferences. For instance, it is possible that a person who leans toward opposing abortion overall would be comfortable with it in the "first trimester", or that people who support abortion overall oppose it for most reasons in the "second trimester"[26]. Therefore, we cannot make assumptions on an individuals' abortion timing preferences based on how permissive they appear in their GSS or ANES responses.

Few studies have tested the impact of including a timing dimension in survey questions. Bumpass (1997) found similar levels of abortion permissibility when the GSS question is asked without a specified duration and when one month is specified. In contrast, the 2006 ANES pilot study described by Zigerall (2012) demonstrated that timing is a "somewhat independent dimension" of abortion attitudes that has been captured by few empirical studies. In general, people tend to endorse abortion earlier in pregnancy than later in pregnancy, but this trend (and its connection to current timing-based legislation) has received little academic attention[27].

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[24] Sawin, SW. "Dating of Pregnancy by Trimesters: A Review and Reappraisal." *Obstetrical & Gynecological Survey* 51, no. 4 (April 1996): 261–64.

[25] Pew Research Center. "What the Data Says about Abortion in the U.S.," March 2024. https://www.pewresearch.org/short-reads/2024/03/25/what-the-data-says-about-abortion-in-the-us/.

[26] Zigerell, L.J. "The New 2006 and 2008 ANES Abortion Attitude Measures." In *Improving Public Opinion Surveys*, 303–21. Princeton University Press, 2012; Jelen, Ted G, and Clyde Wilcox. "Causes and Consequences of Public Attitudes Toward Abortion: A Review and Research Agenda." Long Beach, CA, 2003.

[27] Bumpass, Larry L. "The Measurement of Public Opinion on Abortion: The Effects of Survey Design." *Family Planning Perspectives* 29, no. 4 (1997): 177–80. https://doi.org/10.2307/2953382; Crawford, Brandon. "Examining

Pregnancy length—whether it be measured in trimesters, months, or weeks—is an ever important aspect of the modern abortion debate. Since 2011, pro-life politicians have justified timing-based abortion bans with claims of fetal cardiac activity at the 6-week mark. However, fetal viability is a changing standard and the presence of a "heartbeat" at this time is debated by medical professionals[28]. It is essential that we gauge public opinion on this new dimension of abortion policy in order to assess whether current state-level restrictions align with Americans' attitudes. The lack of a timing dimension in questionnaires like the GSS and ANES might explain why in 2022, 15 states banned abortion before the end of the first trimester, while at the same time, 69% of U.S. adults supported legal abortion during the first trimester[29]. Without reliable and complex measures of abortion attitudes, it is impossible to know what the public thinks about newfound abortion legislation—and if policymakers are truly representing the interests of their constituents.

This study will investigate the role of gestational timing in American's attitudes about abortion permissibility. To measure gestational length, I will opt to use weeks to avoid any ambivalence surrounding the trimester system. I anticipate that asking participants how many weeks into a pregnancy they support abortion will yield less restrictive opinions than asking about abortion generally. For example, I predict that many people who typically identify as anti abortion or pro-life will be accepting of abortion within the first 6 to 12 weeks. Additionally, I

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the Relationship Between Perceptions of Pregnancy and Fetal Development Timing and Support for Abortion Bans." *Journal of Women, Politics & Policy* 45, no. 1 (January 2024): 7–26.

[28] Evans, Dabney. "A Narrative Analysis of Anti-Abortion Testimony and Legislative Debate Related to Georgia's Fetal 'Heartbeat' Abortion Ban." *Sexual and Reproductive Health Matters* 28, no. 1 (2019): 215–31.

[29] NARAL. "Bans on Abortion by Week," 2022. https://reproductivefreedomforall.org/wp-content/uploads/2022/01/WHODecides2022-BANS-BY-WEEK-Report-011722-1.pdf; Saad, Lydia. "Americans Still Split Along 'Pro-Choice,' 'Pro-Life' Lines." *Priests for Life*, May 2011.

expect that including a temporal dimension will cause more people to occupy middle-ground and less absolutist stances than they do in ANES and GSS responses.

Because current General Social Survey and American National Election Studies questions do not mention timing at all, they are missing aspects of abortion attitudes that are relevant to the modern abortion debate. The lack of a timing dimension in public opinion questionnaires may be misrepresenting how people feel about abortion legality, and understanding these feelings and their complexities is essential for combating policies that endanger women across the United States.

This Study

In the previous section, I asked if including a timing dimension in public opinion survey questions would affect the measurement of Americans' abortion attitudes. I hypothesized that the lack of mention of gestational length in longstanding GSS and ANES questions may be misrepresenting how people feel about abortion legality. Including a timing dimension in abortion survey questions may compel respondents to select more middle ground—opposed to absolutist—answer choices regarding when abortion should be allowed. As discussed in the literature, Americans (especially those grouped as pro-life) possess highly complex abortion attitudes that can fluctuate depending on the circumstances[30]. I believe gestational timing is a critical component of public opinion on abortion, and without widespread measures that include timing, it is impossible to know where Americans stand on current reproductive policy. And in

[30] Jozkowski, Kristen N., Brandon L. Crawford, and Mary E. Hunt. "Complexity in Attitudes Toward Abortion Access: Results from Two Studies." *Sexuality Research and Social Policy* 15, no. 4 (December 1, 2018): 464–82. https://doi.org/10.1007/s13178-018-0322-4; Hans, Jason D., and Claire Kimberly. "Abortion Attitudes in Context: A Multidimensional Vignette Approach." *Social Science Research* 48 (November 2014): 145–56. https://doi.org/10.1016/j.ssresearch.2014.06.001.

an era where state-level abortion restrictions are skyrocketing and jeopardizing womens' health across the country, it is crucial to know where Americans draw the line[31].

To investigate the effect of gestational timing on the measurement of American abortion attitudes, I designed an online survey in Qualtrics to be completed by approximately 1000 U.S. adults ages 18 and older. The survey was distributed to a random, representative sample by the polling firm Lucid Theorem. Lucid collected demographic information such as ethnicity, gender, age, and region. Other information including state of residence, political ideology, religion, level of religiosity, education level, and informed consent was asked via questions at the beginning of the survey.

Funding for survey distribution came from Emory's Political Science Department. Completion of the survey was completely voluntary and participants were permitted to exit the survey at any time. The survey could be completed on participants' personal electronic devices from any location. There were no direct benefits to participants from completing the survey, but they may have received some form of compensation from Lucid. The survey contains minimal risks to participants and an overview of the study aims were included in the pre-survey consent form.

The survey asked each respondent 2 questions about abortion: 1 question from a real public opinion questionnaire (either from GSS or ANES) and 1, two-part original question about gestational timing. The survey was created in Qualtrics and distributed electronically through Lucid. Half of the sample was randomly assigned to complete the GSS question, and the other half was assigned to complete the ANES question; all participants completed the same timing

[31] Vilda, Dovile. "State Abortion Policies and Maternal Death in the United States, 2015-2018." *American Journal of Public Health* 111, no. 9 (September 2021): 1696–1704.

question. The order of the two questions were reversed half of the time to minimize question-order bias and priming.

The exact GSS and ANES abortion questions can be found in the previous section, and vary in that the GSS requires six yes or no responses, while the ANES requires a single multiple-choice answer selection. The original question about timing required 2 distinct responses and is included below. The answer choices were presented to participants with a slider bar, ranging from 0 to 36 weeks, so that participants did not encounter an overwhelming list of response choices.

Original timing questions
A typical pregnancy lasts about 40 weeks from the first day of a woman's last menstrual period. Pregnancies are often broken up into trimesters, where the first trimester includes weeks 1 through 12, the second trimester includes weeks 13 through 26, and the third trimester includes weeks 27 through 40 (or whenever delivery occurs) Assuming the woman's health <u>is not</u> at risk, abortion should be permitted…. 1. Never 2. Within the first 6 weeks 3. Within the first 12 weeks 4. Within the first 18 weeks 5. Within the first 24 weeks 6. Within the first 30 weeks 7. Within 36 weeks

If the woman's health is at risk, abortion should be permitted…
1. Never
2. Within the first 6 weeks
3. Within the first 12 weeks
4. Within the first 18 weeks
5. Within the first 24 weeks
6. Within the first 30 weeks
7. Within 36 weeks
8. Full term

Table 2. Original timing questions asked in the survey.

The two-prong timing question included a short explanation of how pregnancy trimesters correlate to weeks to avoid confusion about the answer choices and to inform participants of the length of a typical pregnancy. Though many people do not have a sense of fetal development at each of these time points, they are still able to form opinions on timing-based abortion bans without this knowledge. Therefore, I chose not to provide developmental information to mirror the background with which people form opinions on current legislation.

The answer options provided intentionally correspond to current state-level abortion cut-offs, such as 6 and 12-week bans[32]. Past those initial time points, I included 6-week intervals (instead of trimesters) to encourage respondents to consider precisely where they draw the line for abortion legality. Also, as mentioned earlier, many medical professionals prefer to use weeks instead of trimesters to more accurately measure fetal development. Because much of the modern

[32] Center for Reproductive Rights. "After Roe Fell: Abortion Laws by State," n.d. https://reproductiverights.org/maps/abortion-laws-by-state/.

abortion revolves around trimesters and not weeks, it will be interesting to see up to what week the average respondent believes abortion should be allowed.

I also included a second timing question about the woman's health because scholars have found that maternal health risks are a leading reason people are permissive of abortion. Bane et. al (2003) discovered that roughly 90% of Americans support abortion when a woman's health would be endangered by continuing a pregnancy. This finding was validated by Hans and Kimberly (2014), who found that 38% of respondents who originally opposed abortion changed their responses after learning the abortion was being considered due to a health condition of the mother or fetus. Based on these findings, I predicted that respondents would have, on average, more permissive views (i.e. later week cutoffs) on the second prong of the question than on the first. Though research has found that fetal health conditions also influence peoples' opinions on abortion access, I chose not to include fetal health in the question stem because of potential conflation between fetal health concerns (such as birth defects) and fetal viability. As mentioned before, fetal viability is heavily debated in politics and does not occur at a uniform time-point in a pregnancy.

To derive meaning from survey results, I conducted a within-subject analysis of each survey response. I compared each subject's response to the GSS or ANES question to their response to both timing questions in an attempt to create crosswalks between public opinion question responses and abortion timing cutoffs. After seeing which timing cutoffs, with or without the health risk, correspond to certain GSS or ANES responses (and vice versa), I used multinomial logistic regressions to predict GSS or ANES responses from measured GSS or ANES scores. I used the data from the two timing questions as a link between the two question types. My analysis aimed to allow a novel comparison of ANES and GSS scales and reveal the

timing assumptions tied to each surveys' answer choices. Before looking at survey data, I anticipated that more permissive answers on the GSS and ANES abortion scales would correspond to later timing cutoffs, as "pro-choice" individuals tend to oppose current early abortion bans. I also predicted that the least and most permissive ANES and GSS options—1 and 4, and 0 and 7, respectively—would yield similar timing attitudes.

Results

This thesis aimed to investigate whether including an abortion timing dimension in public opinion survey questions affects the measurement of Americans' abortion attitudes. I argued that the questions in the long-standing public opinion surveys, General Social Survey (GSS) and American National Election Studies (ANES), are failing to capture important aspects of modern abortion attitudes due to their lack of mention of timing. I then predicted that the lack of a timing dimension in these questions may be inflating the proportion of "absolutist" (or highly polarized) abortion opinions recorded in the GSS and ANES data. If people are given the opportunity to state *when*—instead of solely *if*—abortion should be permitted in the United States, I contend that more people will take on middle-ground opinions. More broadly, asking about the "when" of abortion policy could allow researchers and policymakers to have a more precise understanding of public opinion on the various timing-based abortion laws we see today.

To test my predictions, I created an electronic survey that explicitly asked respondents about abortion timing in weeks. In a two-prong timing question, each respondent was asked the week up to which abortion should be permitted, when the mothers' health is and is not at risk. Answer choices were in 6-week intervals, starting at 0 weeks and ending at 36 weeks. In addition to the timing questions, each participant was randomly assigned to answer either the GSS

abortion question or the ANES abortion question (see Table 1). The order of the assigned question and the 2-part timing question was randomized. Before answering the two questions, participants were required to sign a consent form and provide their religion and level of religiosity in the form of multiple-choice questions. Participants were also required to answer a multiple-choice attention check question.

Participant demographic information, including age, gender, annual household income, ethnicity, political party, region, zip code, highest level of education, and whether or not they identify as Hispanic was collected by the survey distribution firm Lucid before the participants began the Qualtrics survey. The Emory Political Science Department Funded survey distribution through Lucid Theorem. The online survey and related materials (STUDY00008822) were deemed exempt from Emory IRB review and approval on January 22nd, 2025 under 45 CFR 46.104 (D)(2ii). The survey was distributed by Lucid on February 18th, 2025 to a random, nationally representative set of survey participants based on age, gender, ethnicity, and region demographics. Data collection began immediately and terminated on February 21st, 2025, when a total of 2326 responses were collected.

I used RStudio for all data cleaning, manipulation, and graph creation. Out of the total 2326 responses, 356 were removed for failing the attention check question. Of the remaining 1970 responses, 980 answered the GSS abortion question and 990 answered the ANES abortion question. Before the timing questions, I included a short, neutrally-worded blurb about pregnancy timing to aid participants who have no familiarity with the topic.

Week cutoff distributions

All participants were given the two-part timing question, however, they had the option to select “Don’t know” instead of selecting a week cutoff response. For the first timing question, week cutoff when there is no maternal health risk, 215 participants selected “Don’t know”. For the second timing question, week cutoff when there is maternal health risk, 290 participants selected “Don’t know”. The “Don’t Know” response was a check box next to the slider, and it could be interesting in future research to investigate whether “Don’t Know” are in some way different from those who gave timing responses.

Of the remaining responses, the distribution of timing responses for both conditions are shown in the figures below.

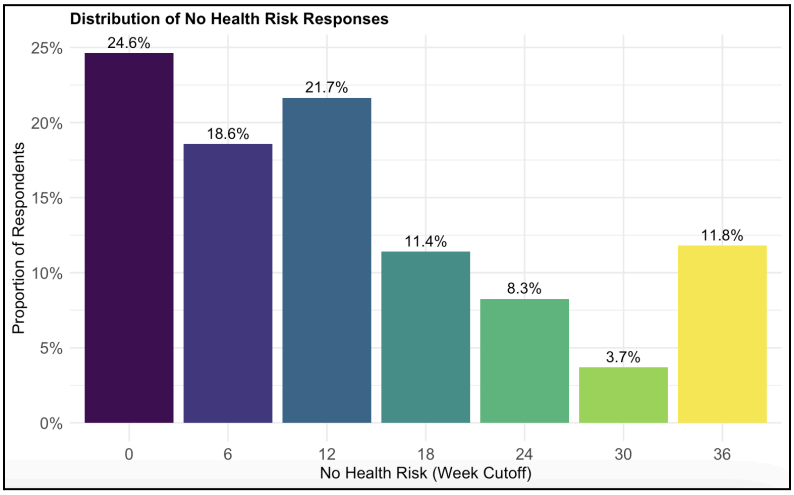

Figure 1.
Distribution of week cutoff responses (no health risk)

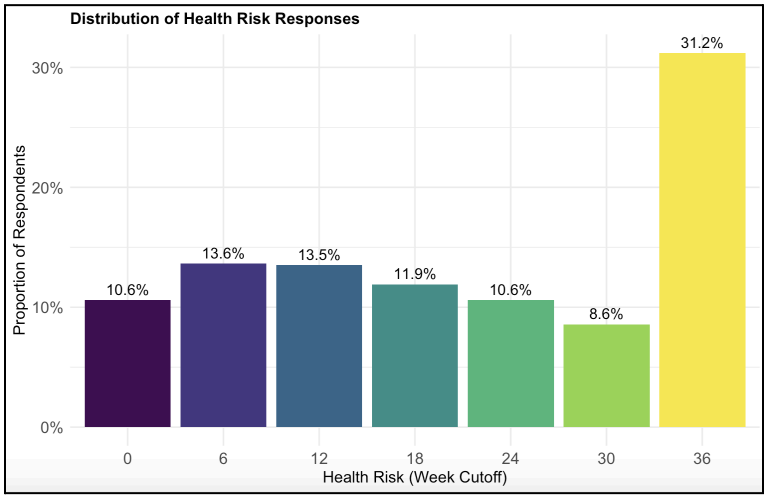

Figure 2.
Distribution of week cutoff responses (health risk)

Figure 1 (left) shows the frequency of each week cutoff response when there is no maternal health risk. The mean response is 13.1 weeks, the median is 12.0 weeks, and there are modes at 0 at 12 weeks. Figure 2 (right) shows the frequency of each week cutoff response when there is a maternal health risk. I expected the presence of a maternal health risk to increase the average week cutoff response, as people tend to be more permissive of abortion later into a pregnancy when the mother's health is endangered. For this condition, the mean response is

20.93 weeks, the median is 24.0 weeks, and the mode is 36 weeks. A paired t-test revealed that the difference in means is statistically significant ($p < 2.2e-16$), which aligns with my prediction.

GSS and ANES Question Scores and Distributions

To analyze GSS and ANES question responses and be able to quantitatively compare them to the week cutoff data, I created new variables that turn GSS/ANES responses into numerical "scores". The ANES question (see table 1) is a single multiple choice question with 5 response options. Response 1—"By law, abortion should never be permitted" —is the least permissive, and response 4— "By law, a woman should always be able to obtain an abortion as a matter of personal choice"—is the most permissive. Response 2 is the second most permissive, and response 3 is the third most permissive. Therefore, I created an "ANES score" that treats the multiple choice responses as ordinal and takes on values 1 to 5. Response 5, however, is kept separate because it corresponds to "Other", which does not fit into the hierarchy of the previous 4 responses.

The GSS question, on the other hand, contains 7 "yes or no" sub-questions. The questions each present a situation when abortion should or should not be permitted, for example, "[If] she is married and does not want any more children? (question 2). Unlike the ANES response options, there is no clear hierarchy in the GSS sub questions. Therefore, I chose to make the "GSS score" a total of "yes" responses to the 7 conditions. Therefore, GSS scores range from 0 (all nos) to 7 (all yesses), and like the ANES score, higher scores correspond to more permissive attitudes towards abortion. The distribution of the ANES scores and GSS scores is shown in the figures below:

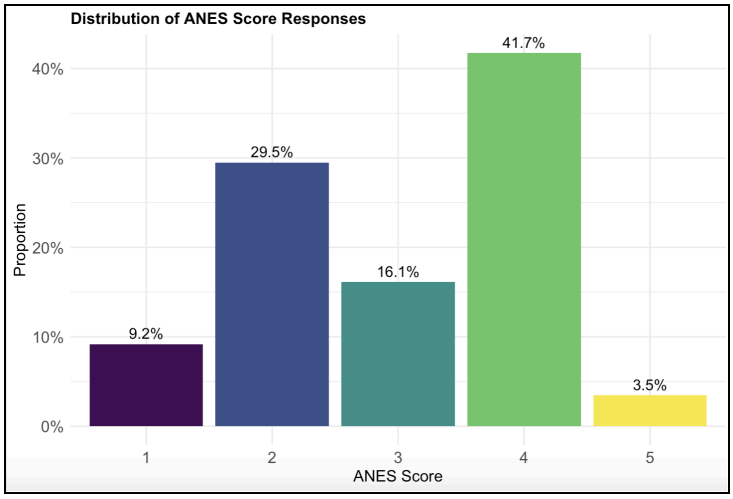

Figure 3.
Distribution of ANES scores (1-5)

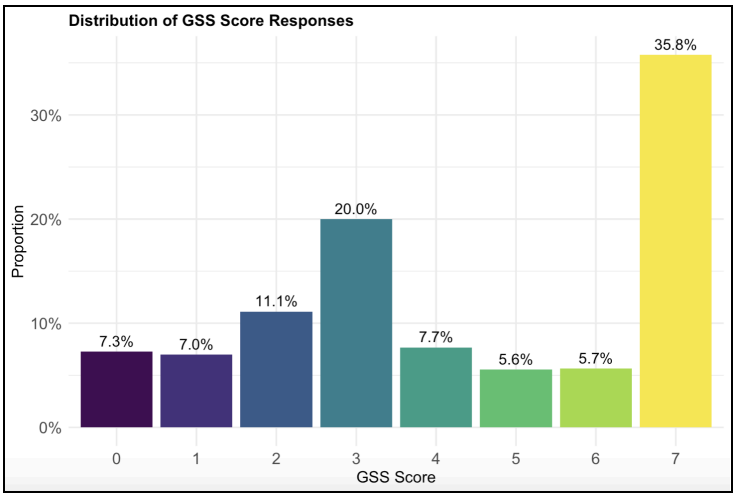

Figure 4.
Distribution of GSS scores (0-7)

Figure 3 (left) shows the frequency of each ANES question response option (essentially the same as the ANES score). The mode ANES score is 4, which corresponds to the most permissive response option. The second most common ANES score is 2, which corresponds to the response "The law should permit abortion only in case of rape, incest, or when the woman's life is in danger." Interestingly, less than 5% of ANES respondents selected 5 (or "Other"). Figure 4 on the right shows the frequency of each GSS score, which is the sum of "yes" answers to the various abortion circumstances. The mean GSS score is 4.32, and the mode is 7, which corresponds to permitting abortion in all 7 conditions. There is also a second peak at 3, but it is difficult to draw conclusions from that mode because a GSS score of 3 could correspond to yes answers for any 7 of the GSS conditions.

Graphical Crosswalks Between ANES and GSS Responses and Week Cutoffs

Though it was insightful to examine and compare response distributions for the 4 question types, the main purpose of the survey was to uncover how different ANES and GSS

response options correlate with specific abortion cutoffs in weeks. To do this, I first employed a graphical approach and plotted the frequency (as a proportion of total responses) of each GSS score (0-7) with a certain week cutoff response (within-subject comparison). I created separate plots for each health condition, as shown in Figures 5 and 6 below:

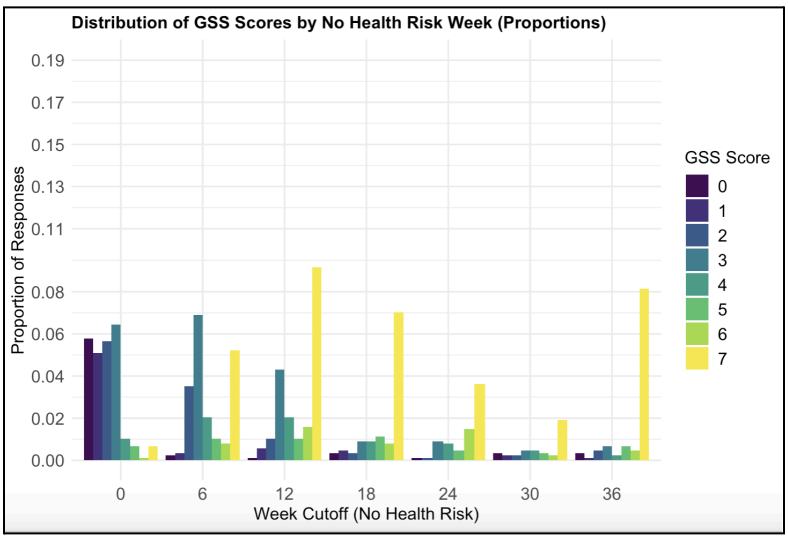

Figure 5.
Distribution of GSS scores by weeks (no health risk)

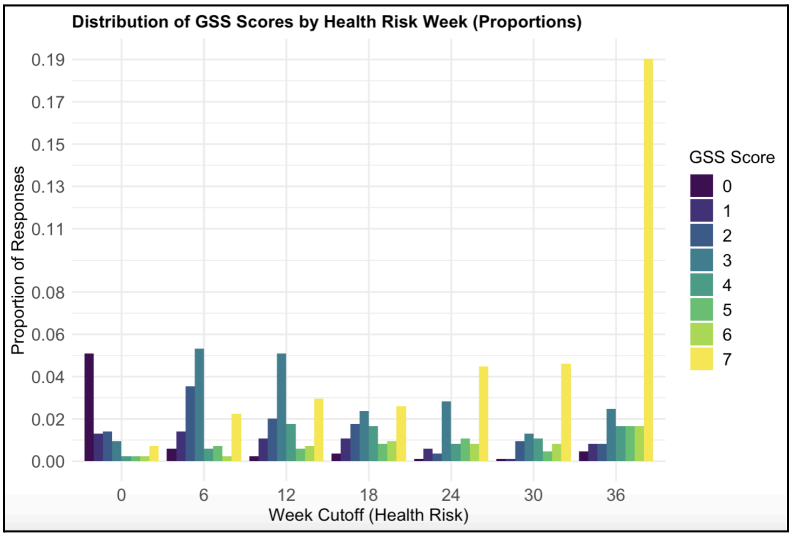

Figure 6.
Distribution of GSS scores by weeks (health risk)

In figure 5 (week cutoffs when no health risk) and figure 6 (week cutoffs when there is a health risk), the proportions of GSS respondents with a certain GSS score *and* week cutoff are shown. This allows us to graphically convert from GSS score to week cutoff and, in doing so, extract new, politically relevant insight from GSS survey responses. For one, figures 5 and 6 show that people who answer "no" to all GSS question conditions—and thus have a GSS score of 0—generally believe that abortion should *never* be allowed. This is also the case (though slightly less so) for people with GSS scores of 1, though unlike the previous group, they extend their week cutoff slightly (to between 6 and 18 weeks) when a maternal health risk is present. Similarly, those with a GSS score of 2 are firmly 0 to 6 weeks on Figure 5 but are predominantly 6 to 18 weeks on Figure 6. A surprising finding is that GSS scores of 7 (the most permissive

option) have modes of 12, 18, and 36 weeks in Figure 5, the most frequent being 12 weeks. However, when a health risk is involved, the mode is 36 weeks.

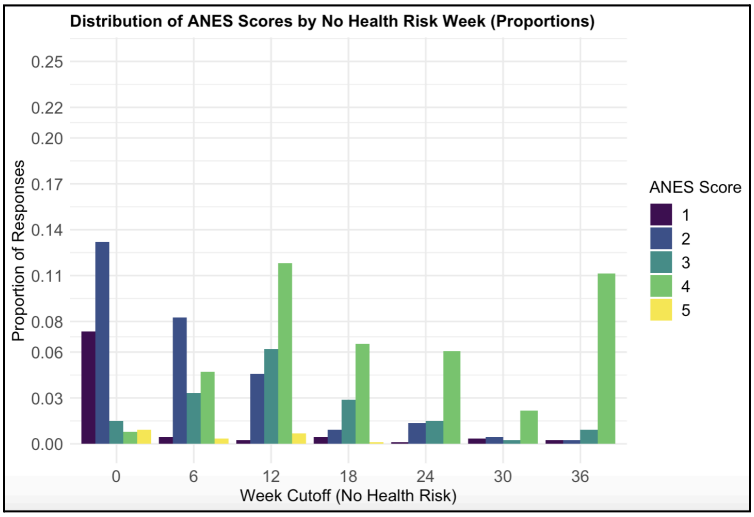

Figure 7.
Distribution of ANES scores by weeks (no health risk)

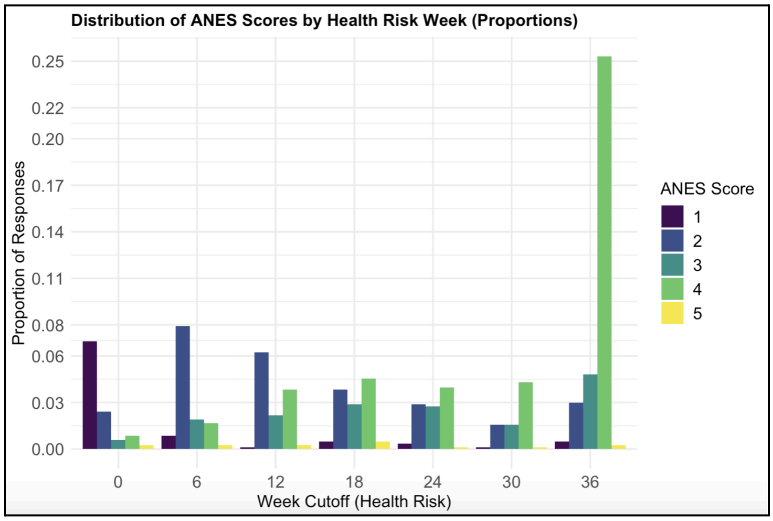

Figure 8.
Distribution of ANES scores by weeks (health risk)

Figures 7 and 8 above show the same graphical crosswalks for ANES scores, which range from 1 to 5. In both figures, we see that as is the case for GSS, the least permissive ANES score (1) corresponds to 0-week cutoffs regardless of the presence of a maternal risk. The second least permissive ANES score (2) corresponds with week cutoffs of 0 to 12 (though largely 0) in figure 7, yet expands greatly to 6 to 18 weeks when a health risk is involved. Notably, a fair share of ANES score 2 respondents were accepting of abortion up to 36 weeks in Figure 8. Finally, people with ANES scores of 3 and 4 followed similar patterns in Figure 8 and largely support abortion up to 36 weeks when there is a maternal health risk. However, a very surprising finding was that people who scored highly on ANES with response option 3—"The law should permit abortion for reasons other than rape, incest, or danger to the woman's life, but only after the need for the abortion has been clearly established"—predominantly answered 12 weeks in figure 7, a relatively early cutoff. People with ANES scores of 4 also frequently responded 12 weeks, though a similar share of that group responded 36 weeks.

Statistical Crosswalks Between ANES and GSS Responses and Week Cutoffs

The above figures helped me to visualize how certain ANES and GSS response options correspond to certain week cutoff responses, with and without a maternal health risk. In addition to these visual representations, I ran two linear regressions to assess the statistical relationship between ANES/GSS question responses and the no health risk timing variable. The below regression tables show which week cutoff values are associated with each ANES/GSS response, and if that relationship is statistically significant. In the ANES regression table, the intercept, 6.0, represents the predicted week cutoff when the ANES score is 5 ("Other"). In the GSS regression table, the intercept, 4.69, represents the predicted week cutoff value when the GSS score is 0.

In the ANES table, we see that, as expected, ANES scores 1 through 4 increase in terms of abortion permissiveness; respondents with ANES scores of 1 are predicted to answer about 4 weeks, respondents with ANES scores of 2 are predicted to answer 6 weeks (like the people who chose "Other"), respondents with ANES scores of 3 are predicted to answer 13 weeks, and respondents with ANES scores of 4 are predicted to answer 21 weeks. Of these relationships, only those for ANES scores 3, 4, and 5 are statistically significant ($p<0.05$). These findings helped to validate that the ANES abortion question is, in some way, correlated with timing, and that the response options 1 through 4 are increasing in abortion permissiveness.

Next, in the GSS table, we see a similar effect of increasing week responses correlated to increasing GSS scores. However, an interesting finding in this table is that people with GSS scores of 0—the least permissive option—are associated with week cutoffs of 4.7, while people with GSS scores of 1—slightly more permissive—are associated with week cutoffs of about 4. This raises the question of which GSS condition received the most "Yes" responses among people with a GSS score of 1. Aside from this finding, GSS scores 1 through 7 increase linearly

in terms of their predicted week cutoff. Of these correlations, the week cutoff predictions for GSS scores of 0, 3, 4, 5, 6, and 7 are statistically significant ($p<0.05$).

Linear Regression: ANES_score Dummies Predicting No_Health_Risk (Weeks)

	No_Health_Risk (Weeks)						
Predictors	*Estimates*	*std. Error*	*std. Beta*	*standardized std. Error*	*CI*	*standardized CI*	*p*
(Intercept)	6.00	2.23	0.00	0.03	1.63 – 10.37	-0.05 – 0.05	**0.007**
ANES_1	-2.17	2.47	-0.05	0.06	-7.01 – 2.66	-0.17 – 0.07	0.378
ANES_2	0.07	2.31	0.00	0.09	-4.45 – 4.60	-0.17 – 0.18	0.975
ANES_3	7.42	2.36	0.23	0.07	2.78 – 12.05	0.09 – 0.38	**0.002**
ANES_4	14.80	2.28	0.63	0.10	10.33 – 19.28	0.44 – 0.81	**<0.001**
Observations	872						
R^2 / R^2 adjusted	0.355 / 0.352						

Figure 9. Linear regression table, ANES scores predicting weeks (no health risk).

Linear Regression: GSS_score Predicting No_Health_Risk (Weeks)

	No_Health_Risk (Weeks)						
Predictors	*Estimates*	*std. Error*	*std. Beta*	*standardized std. Error*	*CI*	*standardized CI*	*p*
(Intercept)	4.69	1.24	-0.69	0.11	2.26 – 7.11	-0.90 – -0.48	**<0.001**
GSS_score1	-0.59	1.78	-0.05	0.15	-4.08 – 2.90	-0.35 – 0.25	0.741
GSS_score2	1.07	1.58	0.09	0.14	-2.04 – 4.18	-0.17 – 0.36	0.498
GSS_score3	3.52	1.44	0.30	0.12	0.70 – 6.34	0.06 – 0.54	**0.015**
GSS_score4	7.86	1.74	0.67	0.15	4.45 – 11.26	0.38 – 0.97	**<0.001**
GSS_score5	11.14	1.90	0.96	0.16	7.41 – 14.87	0.64 – 1.28	**<0.001**
GSS_score6	13.06	1.89	1.12	0.16	9.35 – 16.77	0.80 – 1.44	**<0.001**
GSS_score7	15.04	1.36	1.29	0.12	12.38 – 17.70	1.06 – 1.52	**<0.001**
Observations	883						
R^2 / R^2 adjusted	0.286 / 0.280						

Figure 10. Linear regression table, GSS scores predicting weeks (no health risk).

Randomization of Question Order

As mentioned in the survey design section, the order of questions that survey respondents answered (GSS and timing or ANES and timing) was randomized to avoid priming. With this randomization, ¼ of respondents answered the timing question then ANES, ¼ of respondents answered the timing question then GSS, ¼ of respondents answered ANES then the timing question, and ¼ of respondents answered GSS then the timing question. I anticipated that the ANES and GSS questions might influence responses to the timing question, as they get participants thinking of their abortion attitudes more broadly. For example, if a respondent feels confident in choosing ANES option 2—"The law should permit abortion only in case of rape, incest, or when the woman's life is in danger"—they might choose an earlier week cutoff to mirror that choice. However, I was unable to obtain the question order received by each respondent from the final data, which may have been a mistake in my Qualtrics design. Though the randomization was successful on the participants' end, I cannot assess differences in responses based on question order from the data. In future research, it could be interesting to explore the impact of priming on abortion timing responses, and to investigate whether the GSS and ANES questions have a strong priming effect on subsequent abortion questions.

Statistical Crosswalks Between ANES and GSS Responses Using Week Cutoff Variables

The final layer of survey data analysis involved finding a way to predict ANES/GSS scores for respondents who answered the opposite question. To do this, I utilized a multinomial logistic regression using both of the week cutoff variables (health risk and no health risk) as predictors. The regression used the week-cutoff responses, which were given by all respondents, as common ground between respondents who were assigned to different GSS/ANES conditions. Using the timing responses of all participants, the regression creates a model that allows us to

input a person's recorded ANES or GSS score and get out their predicted score for the question type they did not answer.

I ran the regression twice: once going from measured GSS scores to predicted ANES scores and once from measured ANES scores to predicted GSS scores. The most commonly predicted ANES scores were 2 and 4 (with some 1s), and the most commonly predicted GSS scores were 1, 4, and 7. The results are shown in the below figures, which show the proportions of each predicted score for each recorded score. The regression tables are also included.

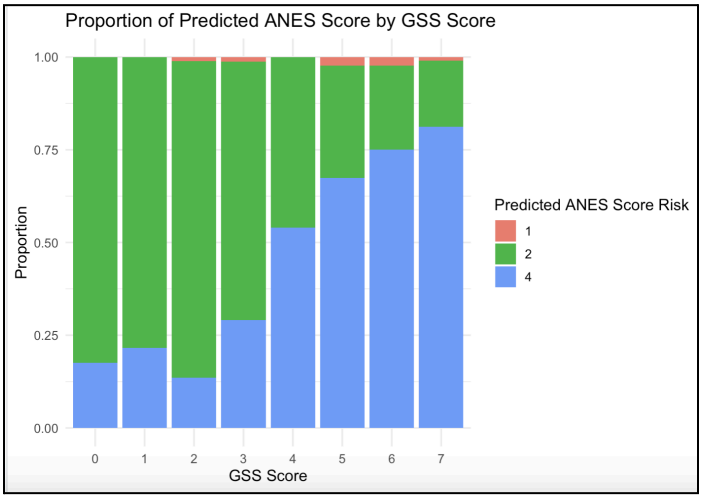

Figure 11.
Distribution of predicted ANES scores for each GSS score

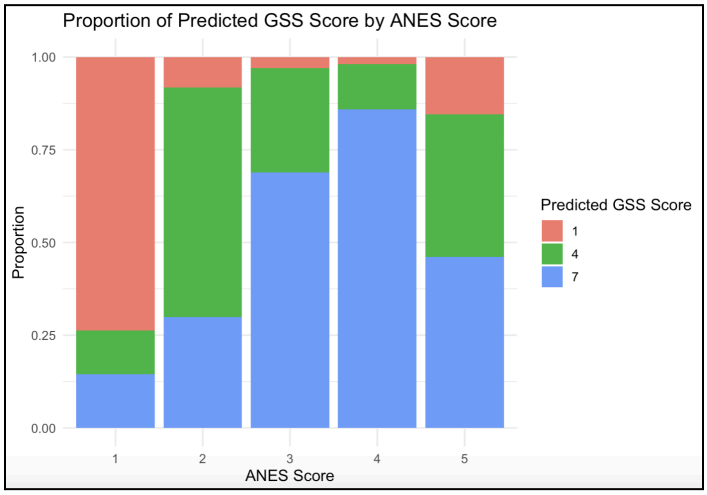

Figure 12.
Distribution of predicted GSS scores for each ANES score

These regressions provide a direct crosswalk between the General Social Survey and American National Election Studies abortion questions. For instance, we can see from the figures that GSS scores of 7 correspond most commonly to ANES scores of 4, which makes sense as they are both the most permissive option. Additionally, these graphs show that people who chose the "Other" option of ANES (score 5) may have similar attitudes to people with a GSS score of 4 or 7, which adds attitudinal meaning to the ambiguous category of "Other". This crosswalk

makes use of both week cutoff variables to predict scores and could be made even more reliable in the future if other variables (such as demographics) were used as additional predictors.

Multinomial Logistic Regression: Predicting GSS_score

	GSS_score Category (0–7)						
Predictors	*Odds Ratios*	*std. Error*	*std. Beta*	*standardized std. Error*	*p*	*std. p*	*Response*
(Intercept)	0.41	0.12	2.17	0.93	**0.002**	0.070	1
Health_Risk	1.16	0.03	7.06	2.69	**<0.001**	**<0.001**	1
No_Health_Risk	0.90	0.03	0.28	0.12	**0.002**	**0.002**	1
(Intercept)	0.69	0.17	4.47	1.74	0.137	**<0.001**	2
Health_Risk	1.16	0.03	6.39	2.33	**<0.001**	**<0.001**	2
No_Health_Risk	0.92	0.03	0.38	0.13	**0.006**	**0.006**	2
(Intercept)	0.85	0.20	11.27	4.13	0.486	**<0.001**	3
Health_Risk	1.17	0.03	7.26	2.55	**<0.001**	**<0.001**	3
No_Health_Risk	0.96	0.03	0.60	0.18	0.095	0.095	3
(Intercept)	0.15	0.05	5.03	1.90	**<0.001**	**<0.001**	4
Health_Risk	1.19	0.03	8.91	3.35	**<0.001**	**<0.001**	4
No_Health_Risk	1.00	0.03	1.02	0.33	0.962	0.963	4
(Intercept)	0.08	0.03	3.27	1.27	**<0.001**	**0.002**	5
Health_Risk	1.17	0.04	7.31	2.88	**<0.001**	**<0.001**	5
No_Health_Risk	1.04	0.03	1.66	0.56	0.134	0.134	5
(Intercept)	0.06	0.02	3.26	1.27	**<0.001**	**0.003**	6
Health_Risk	1.18	0.04	8.78	3.48	**<0.001**	**<0.001**	6
No_Health_Risk	1.04	0.03	1.60	0.54	0.163	0.163	6
(Intercept)	0.16	0.05	17.98	6.51	**<0.001**	**<0.001**	7
Health_Risk	1.23	0.03	13.63	4.81	**<0.001**	**<0.001**	7
No_Health_Risk	1.04	0.03	1.65	0.49	0.091	0.091	7
Observations	810						
R^2 / R^2 adjusted	0.299 / 0.298						

Figure 13. Multinomial logistic regression table, ANES scores predicting GSS scores.

Multinomial Logistic Regression: Predicting ANES_score

	ANES_score Category (1–5)						
Predictors	*Odds Ratios*	*std. Error*	*std. Beta*	*standardized std. Error*	*p*	*std. p*	*Response*
(Intercept)	1.02	0.20	11.64	4.16	0.903	**<0.001**	2
Health_Risk	1.16	0.03	6.78	2.13	**<0.001**	**<0.001**	2
No_Health_Risk	0.95	0.02	0.55	0.17	0.052	0.051	2
(Intercept)	0.17	0.05	10.71	3.82	**<0.001**	**<0.001**	3
Health_Risk	1.19	0.03	9.38	3.07	**<0.001**	**<0.001**	3
No_Health_Risk	1.03	0.03	1.48	0.45	0.200	0.200	3
(Intercept)	0.10	0.03	21.75	7.64	**<0.001**	**<0.001**	4
Health_Risk	1.22	0.03	12.70	4.09	**<0.001**	**<0.001**	4
No_Health_Risk	1.09	0.03	2.76	0.81	**0.001**	**0.001**	4
(Intercept)	0.04	0.02	0.74	0.38	**<0.001**	0.558	5
Health_Risk	1.18	0.04	8.90	4.08	**<0.001**	**<0.001**	5
No_Health_Risk	0.95	0.05	0.52	0.31	0.273	0.273	5
Observations	798						
R^2 / R^2 adjusted	0.390 / 0.389						

Figure 14. Multinomial logistic regression table, GSS scores predicting ANES scores.

Takeaways and Discussion

The results of the survey shed light on multiple patterns between ANES question responses, GSS question responses, and week cutoff answers, when a maternal health risk is and is not present. Firstly, in line with the findings of Hans and Kimberly (2014) and Bane et. al (2003), participants responded with significantly later week cutoffs when the mother's health was endangered by the pregnancy as opposed to when it was not. This trend is visible among both ANES and GSS respondents, as most ANES and GSS scores (with the exception of 1 and 0, respectively) shift their week cutoff 6 or more weeks later in the maternal health risk condition. Next, the graphically presented connections between ANES and GSS scores and week cutoff

responses provide insight into what real ANES and GSS abortion data might suggest about timing. For instance, a person who answers "yes" to all GSS conditions and is deemed as the most permissive might, in reality, draw the line at 12 weeks or right at the cusp of the second trimester. On the other hand, people who select option 3 on ANES, which makes them seem permissive but not to the maximum extent, may actually be okay with abortion into the third trimester if the mother's health is on the line.

Though a first attempt at discerning ANES/GSS to timing relationships, they can provide useful insights about what annually collected ANES and GSS data implicitly reveals about timing attitudes. We saw that the ANES and GSS distributions have modes at the most permissive option, while the timing question (no health risk) yields less permissive modes of 0 and 12 weeks. Though the linear regressions showed some linear correlation between the GSS/ANES response options and timing cutoffs, the more permissive responses do not correlate to timing in the way I expected; in general, people seem to be more permissive in their ANES/GSS responses than in their timing responses. The data revealed that the average respondent is permissive of abortion up until about 13 weeks, or the very beginning of the second trimester. Though this mean increases to 24 weeks when a maternal health risk is taken into account, the 13-week average cutoff value for abortion is much lower than I anticipated. However, this mean may be influenced by the large quantity of 0-week respondents, as 0 and 12 weeks are the modes (Figure 1).

Overall, my results reveal that a large portion of people are not permissive of abortion past the first trimester. However, many state laws currently in place restrict abortion earlier than 13 weeks. As of March 2025, 12 states have total abortion bans, and 4 states have 6-week bans;

all of the bans have exceptions when the woman's life is at risk, but only some have exceptions for when the woman's general health is at risk (Guttmacher Institute 2025).

In my survey, I asked about the woman's health broadly—not life—and still received more lenient week cutoff responses. Therefore, the lack of exceptions for non-life-or-death health issues could indicate some level of incongruence between current policies and public attitudes. In future research, it would be interesting to incorporate demographic variables into the analysis of timing attitudes, as I wonder if, within a state, the public's timing attitudes reflect the abortion laws in place.

Finally, much more statistical work is needed to create a reliable model for converting between ANES and GSS abortion data. As mentioned, incorporating demographic variables as additional predictors could create a stronger model that more accurately predicts a person's ANES or GSS scores. However, this project paves the way for further exploration of public opinion on abortion timing using existing large-scale survey data as a starting place. Whether it be incorporating timing questions into surveys like the ANES and GSS or finding reliable ways to extract timing attitudes from the original question responses, the field of policy making and public opinion research needs more data on Americans' timing attitudes as they relate to the modern abortion debate.

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