

Effects of a US Supreme Court ruling to restrict abortion rights

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Previous research focused on popular US Supreme Court rulings expanding rights; however, less is known about rulings running against prevailing public opinion and restricting rights. We examine the impact of the *Dobbs v. Jackson Women's Health Organization* opinion, which overturned *Roe v. Wade's* (1973) constitutional protection of abortion rights. A three-wave survey panel (5,489 interviews) conducted before the leak of the drafted *Dobbs* opinion, after the leak, and after the official opinion release, and cross-sectional data from these three time points (10,107 interviews) show that the ruling directly influenced views about the constitutional legality of abortion and fetal viability. However, personal opinions were not directly influenced and perceived social norms shifted away from the ruling, meaning that individuals perceived greater public support for abortion. We argue that extensive coverage of opposition to overturning *Roe v. Wade* supported this shift. *Dobbs v. Jackson Women's Health Organization* also caused large changes, polarized by party identification, in opinions about the Supreme Court.

The relationship between Supreme Court rulings and the attitudes and perceptions of the public is critically important—both to understand the Court's influence over the public and to understand the basis for the Court's legitimacy. Typically, public opinion studies examine the relationship between Court rulings and citizens' personal attitudes about the topic of the ruling, or about the Court itself. Less studied but also important is the Court's influence over norm perceptions, or perceptions of what behaviours or opinions are prevalent or desirable in the USA. Norm perceptions influence how people behave, including whether they can publicly express their personal opinions¹. Additionally, the Court can influence opinions about the issues most central to its function: the legality of certain rights or obligations.

In recent years, the Court's rulings have veered away from the average American's views², putting into sharp relief tensions between the Court's leanings and majority public opinion. We asked how the Supreme Court influences the public when it issues a major ruling

against prevailing public opinion and restricts rights rather than expanding them. When the Court is curtailing rights, does the Court's power of persuasion cause attitudes, norm perceptions and ideas about legality and constitutionality to follow the direction of its ruling, as suggested in previous work^{3,4}? Or does a contraction of citizens' rights drive a retrenchment in attitudes and perceptions among people who disagree with the ruling? Finally, does an unpopular ruling that restricts rights affect the perceived legitimacy of the Supreme Court and support for institutional reforms? We answer these questions in the context of the 2022 Supreme Court ruling in *Dobbs v. Jackson Women's Health Organization*. In contrast to most Court rulings previously studied in relation to public opinion, *Dobbs v. Jackson Women's Health Organization* rolled back (as opposed to expanded) constitutional rights when it overruled *Roe v. Wade* (1973), the well-known case that established a constitutional right to an abortion. Importantly, the ruling also went against prevailing public opinion supporting legal access to abortion⁵.

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Broadly, two classes of theory anticipate how the Court can influence the public. One predicts direct and positive effects on opinion: the Court rules, legitimizing the position it favours, and public opinion follows^{3,4,6}. A second predicts indirect and mixed effects: the Court rules, bringing the issue into public discourse, and individuals discuss, observe media and public reactions, and either crystallize or change their original opinions about the issue^{7–10} or about the Court itself¹¹. These two theoretical frameworks predict that public opinion and ideas about the Constitution follow the direction of the Court ruling, and that the public will polarize or move in an opposite direction of the Court ruling, respectively. Of course, most information people receive about the Court is mediated; few are downloading and reading Court opinions directly. However, by ‘direct influence’ we mean people’s reactions to the Court’s behaviour per se, whereas ‘indirect influence’ encompasses how the media subjectively interpret the Court’s actions, including communicating public norms.

Building on the theory of indirect influence, psychological theories of norm perception would anticipate that highly salient Court rulings draw individuals’ attention to public discourse about the ruling, leading individuals to update their perceptions of the public consensus or the social norm. This indirect effect is a result of social perception processes that are stimulated by credible and salient influences, such as the Court and the mass media¹. This shift in norm perceptions could consequently affect personal opinions^{12–14}, although not necessarily¹⁵.

Previous evidence shows both positive^{16–19} and mixed or polarizing^{7,9,20} influences of the Court on public opinion about policy issues, but the causal relationship is difficult to establish because little research collects data in a time series fashion designed to capture the immediate effect of the Court’s ruling, separate from the effects of legislative changes that follow. Instead, survey responses are often collected months after the ruling, and researchers resort to identification strategies such as comparing people who report knowing versus not knowing about the ruling (for example, Franklin and Kosaki⁷, but also refs. 16, 21, 22). While the typical approach of cross-sectional surveying across long periods of time can illuminate long-term trends in public opinion, repeated measurement within tight time intervals surrounding a major event are better for capturing the immediate impact on the public. Some studies use this inference strategy, but then only measure personal attitudes and not perceived norms and ideas about legality and constitutionality¹⁵.

The present article aims to improve the estimation of immediate causal effects of a Supreme Court ruling as well as the measurement of its potential effects on the public. We track the effects of the leaked and final *Dobbs v. Jackson Women’s Health Organization* ruling on attitudes, perceived norms, and ideas about the Constitution in two nationally representative YouGov surveys, one panel and one cross-sectional. Both types of surveys were used to capture reactions to the Court’s ruling in the days after the leaked draft and the official ruling, a strong research design given that the precise date of each was unknown to the public beforehand. A fair critique of this strategy is that there is always public anticipation of a ruling’s announcement date in June. Thus, our research is further strengthened because we are able to capture the effect of the leaked draft of the ruling on 2 May 2022, published on the website *Politico*, which was a genuine surprise to the public and to members of the Court itself. Our survey effort is unique in that we were in the field shortly before the unanticipated leak. Because we measured outcomes collected at three different times—before the leak, after the leak but before the final ruling, and after the ruling—we can directly assess the impact of the as-if randomly timed leak and ruling. We collected the two samples, panel and cross-sectional, to leverage the strengths of each. The panel design contrasts with most public opinion polling in that it allows for fixed effects estimation that is less prone to sampling bias. However, in panel designs with repeated questions, respondents may come to suspect and be influenced by their perceptions of the researcher’s hypotheses, or may drop out of

the panel based on factors related to the topic. Cross-sectional designs are less susceptible to these critiques. Therefore, the two analytical approaches have unique strengths and limitations, and also serve as a built-in replication of findings.

The specifics of *Dobbs v. Jackson Women’s Health Organization* provide a uniquely powerful opportunity to study the impact of Court rulings on public opinion. First, *Dobbs v. Jackson Women’s Health Organization* is well positioned to affect public opinion due to the salience of the issue and of the case. Abortion is central to the American political landscape and the pursuit of overturning *Roe v. Wade* was a key policy objective of the Republican Party. If Americans are able to name any Supreme Court case, the vast majority name *Roe v. Wade*²³. So, while few people closely follow the Supreme Court and its rulings, the leaked draft ruling indicating the Court’s intention to overturn *Roe v. Wade* was heavily covered by the press. Second, *Dobbs v. Jackson Women’s Health Organization* is positioned to study meaningful opinion change because many individuals have well-structured and even morally grounded opinions about abortion, given its centrality to American political and religious discourse. Third, *Dobbs v. Jackson Women’s Health Organization* rolls back rather than expands constitutional rights, which is a different kind of landmark ruling than has been studied in the past (for example, gay and transgender rights), and it goes against majority public opinion⁵, meaning that any positive persuasion effects are not easily explained by pre-existing trends in public opinion. All of these factors make *Dobbs v. Jackson Women’s Health Organization* a good test case, even compared to other cases that have rolled back rights—including *Shelby County v. Holder* (2013) (voting rights), *Koromatsu v. U.S.* (1944) (racial discrimination) and *Masterpiece Cakeshop v. Colorado Civil Rights Commission* (2018) (LGBT+ rights), which were less discussed by the media and public discourse.

We thus tested two theories at play in the literature on the Supreme Court and its influence: (1) the Court will have a direct positive effect on personal attitudes, perceptions of norms and views on abortion legality and constitutionality in the direction of its ruling; (2) the Court will have an indirect effect on personal attitudes, perceptions of norms and legal and constitutional views by provoking media coverage and public discourse that causes individuals to crystallize or polarize their previous stance or to be influenced by the direction of the media and public discourse. To further evaluate this hypothesis, we supplemented our survey data with media content analysis that captured online engagement with abortion public opinion polling and television coverage of the Court case. Finally, we tested whether perceptions of Court legitimacy, or ‘diffuse support’ for the Court²⁴ change when the Court rules in a less popular direction. A longstanding and well-supported finding in the judicial politics literature is ‘positivity theory’ or the claim that belief in the Court’s legitimacy is largely resistant to adverse rulings²⁵. This is presumably because the judiciary relies on symbols of authority.

Our interdisciplinary approach brings together dependent variables studied by psychologists (attitudes and norms perceptions), political scientists (institutional support and policy attitudes) and legal scholars (perceptions of legitimacy and legality and constitutionality). This holistic approach allows us to capture various nuances of how the public responds to monumental Court decisions and to shed light on social psychological responses to institutions more broadly.

Results

Summary of findings

Most of our evidence comports with a model of indirect influence whereby the Court rules in a salient case, the media and the public react, and the public updates its perceptions based on the observed reaction. We find that the Court’s ruling influenced respondents’ perceptions of social norms in a direction contrary to the ruling. Specifically, respondents were more likely to perceive that ‘people in America

favour' legalized abortion access after the ruling. We explored one potential path of influence through social media, showing high engagement with the *Dobbs v. Jackson Women's Health Organization* ruling on Twitter, particularly with polls revealing that the majority of Americans supported legalized abortion access.

We found the largest impact of the *Dobbs v. Jackson Women's Health Organization* ruling on perceptions of the Supreme Court itself. After both the leak and the ruling, Republicans assessed the Court as significantly more legitimate, whereas Democrats assessed it as significantly less legitimate. This finding contradicts longstanding theories regarding the stability of Court legitimacy, even in the wake of unpopular opinions. Support for Court reforms, such as expansion and term limits, also increased among Democrats after the leak.

Our data showed limited support for a theory of direct positive influence of the Supreme Court on the public. The leaked draft ruling was associated with a small increase in support of the more specific legal issue of overturning *Roe v. Wade* and of the holding in *Dobbs v. Jackson Women's Health Organization*. These effects were driven by Republican respondents and are distinct from people's beliefs about public support for abortion. Additionally, the focus of *Dobbs v. Jackson Women's Health Organization* on the constitutionality of abortion at 15 gestational weeks seems to have anchored public perception: after the ruling, we observed a shift among all respondents in perceived age of fetal viability from above 15 weeks on average to below 15 weeks on average. Apart from matters of constitutionality, we found little evidence of change to personal attitudes regarding whether abortion should be legally accessible and if abortion is moral.

In all the analyses that follow we used two-tailed tests from ordinary least squares (OLS) regression models. Our data and approach met the assumptions for OLS regression.

Norms: perceptions of Americans' abortion opinions

We first examined the perceptions of norms around abortion legality and morality. We found that norm perceptions regarding abortion legality moved in a direction contrary to the Court ruling, a direction predicted by models of indirect influence. Respondents were significantly more likely to report that 'people in America believe' abortion should be legal for women who choose to have one (panel sample: 2.4 percentage points (pp); $t_{(1,576)} = 2.70$, $P = 0.007$, 95% confidence interval (CI) = 0.007 to 0.041; cross-sectional sample: 2.0 pp; $t_{(10,045)} = 2.94$, $P = 0.003$, 95% CI = 0.007 to 0.033) after the ruling compared to before (Fig. 1a–c). There were no statistically significant changes in the perceptions of Americans' moral opposition to abortion. Note that perceived norms of abortion, personal opinions about abortion and opinions about fetal viability were asked for the first time after the leak (see all regression tables with results in the Supplementary Information).

How large was the shift in norm perception after the *Dobbs v. Jackson Women's Health Organization* ruling? We can compare it to the rate and size of change in personal attitudes towards abortion over the decade before *Dobbs v. Jackson Women's Health Organization*. Since 2012, Americans' personal attitudes favouring legalized abortion shifted on average 1 pp every year, with total support increasing 6 pp over the past decade⁵. The shift we observed in respondents' norm perceptions of other Americans' support for legalized abortion is equivalent to approximately one-third of the past decade's total change in personal attitudes.

Court legitimacy and Court reform

We next examined the effect of *Dobbs v. Jackson Women's Health Organization* on perceptions of the Court itself. Across both samples and in response to the leak and to the ruling, we observed large polarized shifts in participants' judgements of the legitimacy of the Court. The polarization is accounted for by participants' party identification (Fig. 2a–c). For Republicans, Supreme Court legitimacy increased after the leak by 3.2 pp ($t_{(817)} = 3.63$, $P < 0.001$, 95% CI = 0.015 to 0.049) in

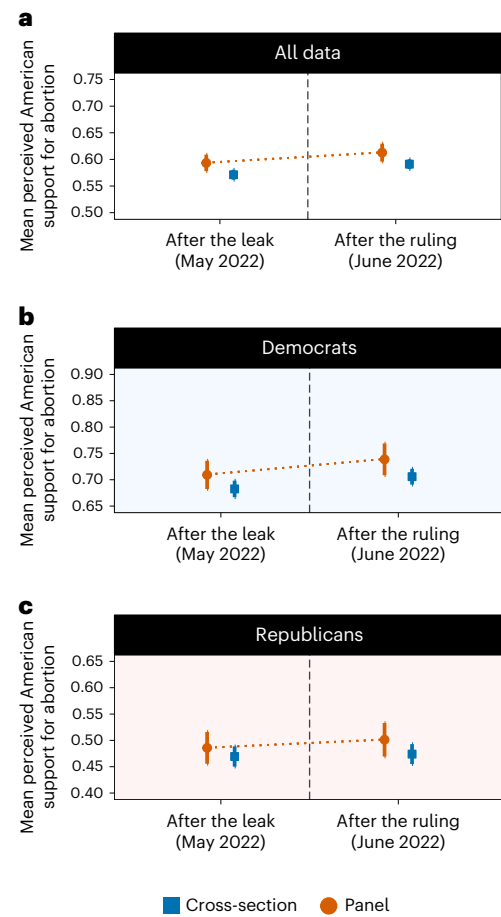


Fig. 1 | Changes in norm perceptions regarding the extent to which a respondent believed that other Americans support legalized abortion.

a–c, Weighted means and 95% CIs were plotted. Note that the first panel wave was also used in the analysis as the first cross-sectional wave. To increase visibility, we shifted the y axis limits for each panel although the total y axis range, which was consistent between panels. The orange dotted line indicates the same respondents across waves. **a**, All data. **b**, Democrats. **c**, Republicans.

the panel (cross-sectional sample: 3.3 pp, $t_{(2,963)} = 2.97$, $P = 0.003$, 95% CI = 0.011 to 0.055) and by an additional 4.6 pp ($t_{(817)} = 4.43$, $P < 0.001$, 95% CI = 0.026 to 0.066) after the ruling (cross-sectional sample: 3.8 pp, $t_{(2,963)} = 4.09$, $P < 0.001$, 95% CI = 0.020 to 0.056). However, for Democrats, Court legitimacy decreased by 6.5 pp ($t_{(937)} = -7.70$, $P < 0.001$, 95% CI = -0.081 to -0.048) in the panel (cross-sectional sample: 7.9 pp; $t_{(3,933)} = -8.31$, $P < 0.001$, 95% CI = -0.097 to -0.060) after the leak and by an additional 4.8 pp ($t_{(937)} = -5.37$, $P < 0.001$, 95% CI = -0.065 to -0.030) after the final ruling (cross-sectional sample: 3.5 pp, $t_{(3,933)} = -5.25$, $P < 0.001$, 95% CI = -0.048 to -0.022). From baseline to after the ruling, perceived legitimacy decreased substantially among Democrats (11.3 pp in the panel and 11.4 pp in the cross-sectional sample). Note that the single, before-the-leak survey serves as the initial baseline wave for both the panel and the cross-sectional study.

Democrats' perceptions of the Court depreciated substantially with the leak and the ruling. Meanwhile, their interest in Court reform increased. We found that Democratic respondents' support for increasing the size of the Court increased significantly after the leak compared to Republicans (tested with an interaction term in our model) in the panel sample (4.9 pp; $t_{(3,338)} = 2.66$, $P = 0.008$, 95% CI = 0.013 to 0.086) and in the cross-sectional sample (7.6 pp; $t_{(12,159)} = 3.18$, $P = 0.001$, 95% CI = 0.029 to 0.12). There was an additional differential effect of the ruling in the panel sample (4.3 pp; $t_{(3,338)} = 2.21$, $P = 0.027$, 95% CI = 0.005

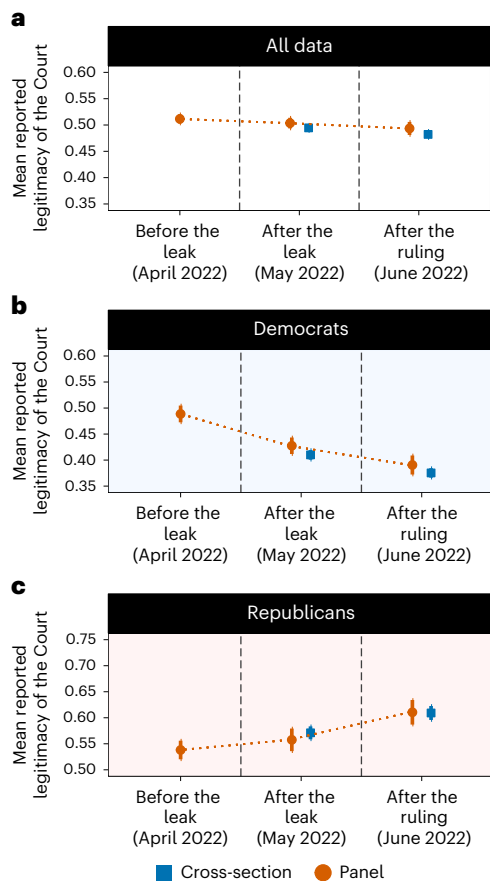


Fig. 2 | Changes in the perceived legitimacy of the US Supreme Court between waves. **a–c.** Weighted means and 95% CIs were plotted. Note that the first panel wave is also used in the analysis as the first cross-sectional wave. To increase visibility, we shifted the y axis limits for each panel although the total y axis range was consistent between panels. The orange dotted line indicates the same respondents across waves. **a.** All data. **b.** Democrats. **c.** Republicans.

to 0.082) but not in the cross-sectional sample (-1.6 pp; $t_{(12,159)} = -0.87$, $P = 0.38$, 95% CI = -0.02 to 0.053). Compared to Republicans, Democrats were also more supportive by 7.8 pp ($t_{(3,297)} = 4.24$, $P < 0.001$, 95% CI = 0.042 to 0.11 in the panel sample and 9.9 pp ($t_{(12,064)} = 4.53$, $P < 0.001$, 95% CI = 0.056 to 0.14 in the cross-sectional sample) of establishing term limits after the leak. After the ruling, Democrats were an additional 7.9 pp ($t_{(3,297)} = 4.26$, $P < 0.001$, 95% CI = 0.043 to 0.12) in the panel sample, and 6.1 pp ($t_{(12,064)} = 3.66$, $P < 0.001$, 95% CI = 0.028 to 0.094 in the cross-sectional sample) more supportive of the proposed policy. It is important to note that shifts in perceived Court legitimacy and support for reform could have been impacted by other 2022 rulings on politically polarizing cases. For example, the day before the official publication of the *Dobbs v. Jackson Women's Health Organization* opinion, the Court ruled 6 to 3 on cases concerning gun restrictions and separation of church and state. However, between April and the leak of the *Dobbs v. Jackson Women's Health Organization* opinion, when survey waves 1 and 2 were collected, there were no major Court decisions that received mass attention. Thus, we could assume that the shift in perceived legitimacy between these two time points is most reasonably associated with the *Dobbs v. Jackson Women's Health Organization* leak.

Personal views on abortion constitutionality and legality

We found little evidence for a theory of direct or indirect Court influence when examining participants' personal attitudes about abortion

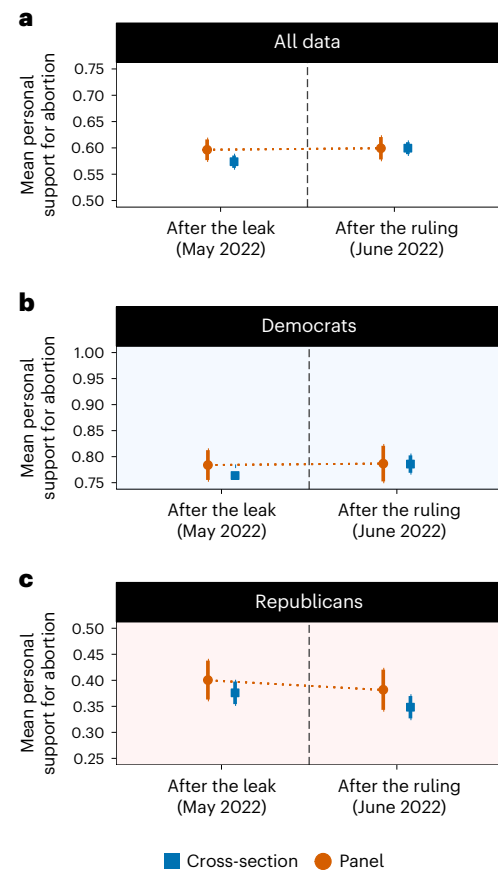


Fig. 3 | Changes in personal attitudes towards abortion between waves. **a–c.** Weighted means and 95% CIs were plotted. Note that to increase visibility, we shifted the y axis limits for each panel although the total y axis range was consistent between panels. The orange dotted line indicates the same respondents across waves. **a.** All data. **b.** Democrats. **c.** Republicans.

(Fig. 3a–c). In the cross-sectional analysis only, we found a statistically significant 2.6 pp increase in personal support for maintaining legal abortion access ($t_{(10,056)} = 3.08$, $P = 0.002$, 95% CI = 0.009 to 0.042) associated with the ruling. This effect was not present among Republicans (Supplementary Table 54) and there are no statistically significant changes in attitudes towards abortion legality in the panel (Supplementary Table 53). We found no statistically significant changes in either dataset in terms of individuals' moral opposition to abortion (Supplementary Tables 55 and 56).

We next examined views about the legality (or constitutionality) of abortion, for example, opinions about whether *Roe v. Wade* should be overturned or whether the *Dobbs v. Jackson Women's Health Organization* 15-week gestation limit should remain (Fig. 4a–c). Respondents read brief descriptions of each case and were asked how they thought the Court should rule. We found that, after the leak, responses of 'Roe v. Wade should be overturned' increased by an average of 3.0 pp in the panel ($t_{(3,314)} = 2.33$, $P = 0.02$, 95% CI = 0.005 to 0.055) and 6.4 pp in the cross-sectional sample ($t_{(12,095)} = 4.47$, $P < 0.001$, 95% CI = 0.036 to 0.091). The effect was driven by Republicans, who increased their support for overturning *Roe v. Wade* by 5.7 pp ($t_{(820)} = 2.51$, $P = 0.012$, 95% CI = 0.012 to 0.10) in the panel and by 12.2 pp ($t_{(2,984)} = 4.61$, $P < 0.001$, 95% CI = 0.07 to 0.17) in the cross-sectional sample. Also after the leak, we found a 3.3 pp increase in support of upholding the constitutionality of the Mississippi abortion restriction at issue in *Dobbs v. Jackson Women's Health Organization* ($t_{(12,004)} = 2.28$, $P = 0.02$, 95% CI = 0.005 to 0.062), although the effect was statistically significant in the cross-sectional sample only.

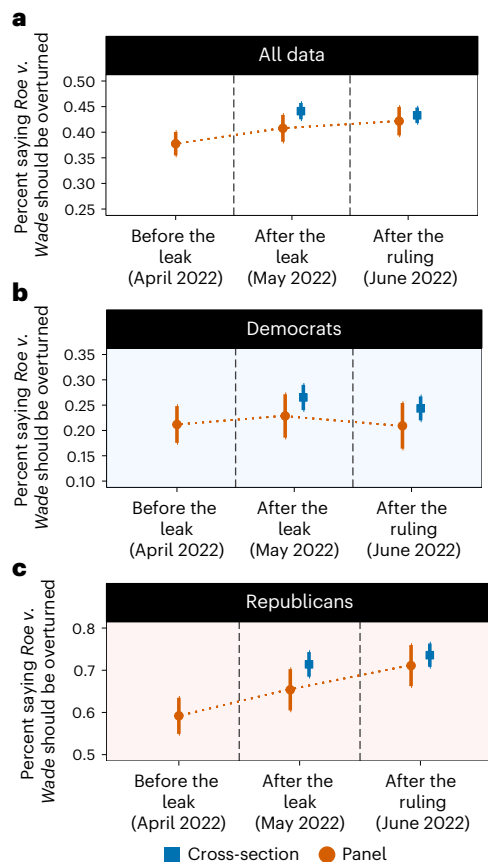


Fig. 4 | Changes in views on the constitutionality of abortion between waves. a–c. Weighted means and 95% CIs were plotted. Note that to increase visibility, we shifted the y axis limits for each panel. The orange dotted line indicates the same respondents across waves. **a**, All data. **b**, Democrats. **c**, Republicans.

One key question emerging from these results is why attitudes about the constitutionality of *Roe v. Wade* changed about twice as much as views of *Dobbs v. Jackson Women's Health Organization* (6.4 pp compared to 3.3 pp in the cross-sectional sample; 3.0 pp compared to 1.6 pp (not significant) in the panel). We turned to our media analysis to better understand and found that television news coverage essentially ignored *Dobbs v. Jackson Women's Health Organization* and focused its discussion on *Roe v. Wade* (Supplementary Fig. 1). Indeed, between April and August, television media mentioned *Roe v. Wade* 36.5 times for each mention of *Dobbs v. Jackson Women's Health Organization*. This focus on *Roe v. Wade* in the national media conversation is reflected in our data.

Because the law at issue in *Dobbs v. Jackson Women's Health Organization* sought to ban abortion after 15 gestational weeks, we asked participants at which week of pregnancy a fetus is considered 'viable, that is, a human life'. In both samples, we found that perceptions of the average age of viability decreased significantly after the Court ruling, from just above 15 weeks to just below 15 weeks: panel: -1.04 weeks; $t_{(980)} = -3.02$, $P = 0.003$, 95% CI = -1.71 to -0.36 ; cross-section: -0.66 weeks; $t_{(7,279)} = -1.98$, $P = 0.048$, 95% CI = -1.32 to -0.006 . There was a non-significant downward trend for Republicans and a statistically significant downward trend among Democrats in the cross-section and among Republicans in the panel. The interaction between Republicans and Democrats was not statistically significant for either the panel (-0.12 weeks; $t_{(976)} = -0.13$, $P = 0.90$, 95% CI = -1.92 to 1.68) or the cross-section (1.00 weeks; $t_{(7,275)} = 1.30$, $P = 0.19$, 95% CI = -0.51 to 2.52).

Exploratory analysis

Attention to social media commentary on the Court. The shift in norm perception in a direction contrary to the Court ruling is consistent with a theory of indirect Court influence, in which people take cues from mass media and public discourse that is sparked by a Court ruling to understand social norms. Figure 5a,c shows evidence of a social media environment that could have influenced people to perceive more rather than less supportive norms of abortion access (see Supplementary Information, Section 7 for more details about these Twitter data). Figure 5a shows that people paid attention to the issue on Twitter after the leak and Fig. 5c shows that immediately after the ruling, 4 million tweets engaged with abortion polls showing that the majority of Americans supported legalized abortion. For scale, a recent national event, the 6 January 2021 attack on the US Capitol, generated approximately 10 million tweets²⁶. A close reading of a random sample of 1,000 tweets that reference this polling suggests that Twitter users were specifically fixated on the misalignment between the Court's final decision and public opinion. Figure 5b,d show that the sentiment of the majority of tweets about abortion and about polling were negative, allowing any individual observing these tweets to infer widespread displeasure with the Court for rolling back the constitutional protection of abortion access.

Complementing this analysis, we found in our survey data that learning about the leak from social media (approximately 38% of our sample) was associated with people being less likely to feel *Roe v. Wade* should have been overturned, and positive effects on perceived norms of support for abortion and personal attitudes towards abortion. While these data are consistent with our aggregate results, the relationship is endogenous and we could not identify the direction of the effect.

Those who learned about the leak from social media were distinct from those who did not (using wave 2 of our cross-section because two of our three outcome measures were introduced on this wave). Social media learners reported significantly lower levels of support for overturning *Roe v. Wade* ($b = -0.12$; $t_{(3,536)} = -5.99$, $P < 0.001$, 95% CI = -0.15 to -0.08). Social media learners also reported significantly higher perceptions of public support for abortion among people in America ($b = 0.03$; $t_{(3,549)} = 2.79$, $P = 0.005$, 95% CI = 0.01 to 0.06) and more positive personal attitudes ($b = 0.11$; $t_{(3,555)} = 6.99$, $P < 0.001$, 95% CI = 0.08 to 0.14). The fact that the result for personal attitudes, which did not move in our analysis, was positively related to social media exposure (11 pp) suggests that social media was a source for those who supported abortion in the first place. However, when looking at our (more robust) panel and support for overturning *Roe v. Wade*, we find a statistically insignificant interaction between the leak dummy variable and social media as the leak source ($b = -0.00$; $t_{(4,534)} = -0.03$, $P = 0.97$, 95% CI = -0.08 to 0.07 ; for the full results, see Supplementary Information, Section 8).

The minimal role of traditional media. Unlike cases from previous work where the media framed Court decisions¹¹ or alter public opinion by disproportionately focusing attention on majority opinions¹⁰, abortion is such a divisive and salient issue that there was little room for the media to frame the substance of *Dobbs v. Jackson Women's Health Organization* or to alter the meaning of the case. Rather than fulfilling their traditional role of guiding the public on how to think about the Court's rulings, the media contrasted strong existing public views with a ruling. We identified 21 polls on American attitudes on abortion in the period around *Dobbs v. Jackson Women's Health Organization*, of which 20 found strong public support for abortion rights. Media coverage solely focused on these 20 polls, with the outlier poll only cited in a small network of right-wing, non-news websites. Public opinion, when covered, showed the misalignment between the Court and the public.

While those who learned from cable news reported significantly higher levels of support for overturning *Roe v. Jackson Women's Health Organization* ($b = 0.14$; $t_{(3,536)} = 7.33$, $P < 0.001$, 95% CI = 0.10 to 0.18) in

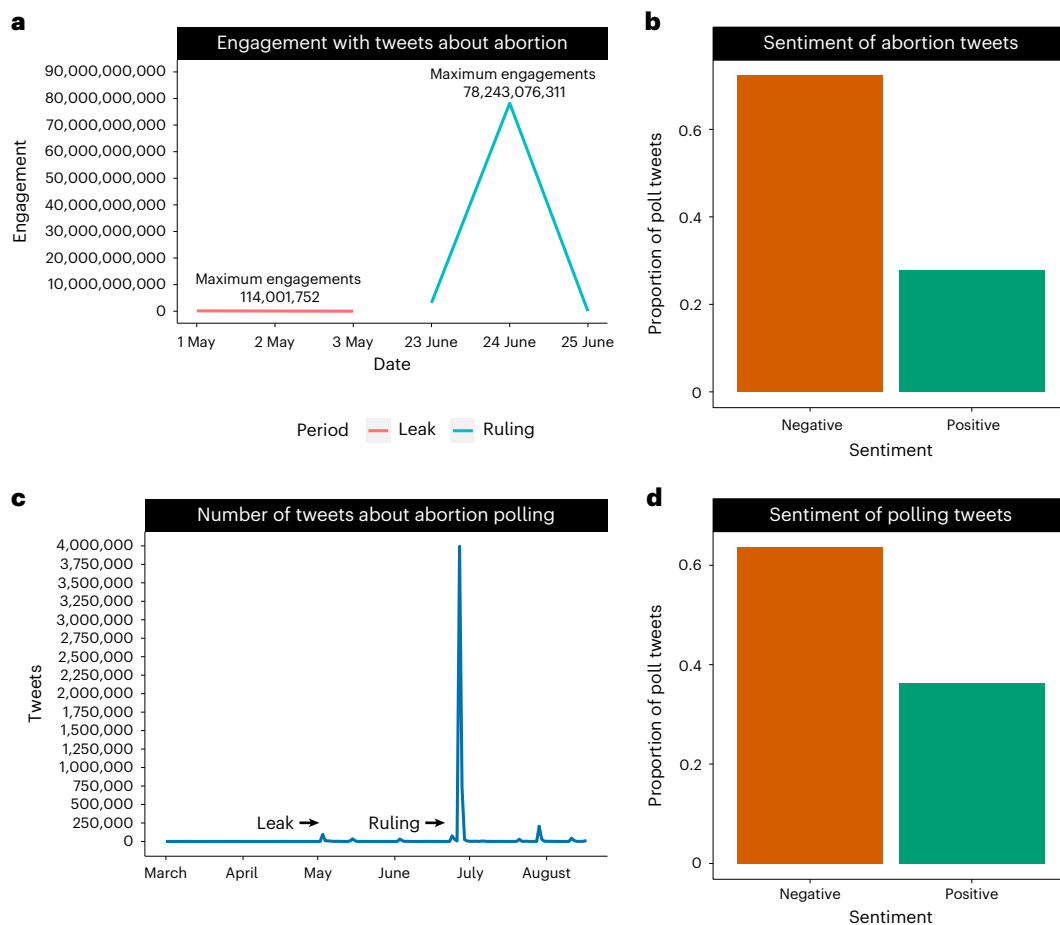


Fig. 5 | Public engagement with abortion on Twitter. **a**, Engagement with tweets about abortion. **b**, Sentiment of abortion tweets. **c**, Number of tweets about abortion polling showing majority support for legal abortion access.

d, Sentiment of tweets about the polling. Because of limits in the Twitter application programming interface, we were only able to capture total tweets for a narrow window around the leak and ruling.

wave 2 of the cross-section, we found no statistically significant interactions between cable news consumption and Court events (the leak and the decision) for our three main outcome measures.

State-level heterogeneity. Given the wide variety of state-level abortion laws, it is reasonable to think that a respondent's state of residence would affect their views after *Dobbs v. Jackson Women's Health Organization*. This was not the case. There was no correlation between presidential swing state status: Republican (red), Democratic (blue) and swing (purple). There was also no relationship between states that had trigger laws and those that did not. In both cases we found expected differences in baseline attitudes, but no interaction between having state groupings and the decision. Although our sample was large, we were underpowered for a full state-by-state analysis using statistical techniques such as multilevel regression and post-stratification; see Supplementary Information, Section 8 for the full results.

Discussion

This study offers the following lessons for the study of the Supreme Court and its influence on public attitudes, norms and views of the Constitution. First, this research suggests that Court opinions can shift social norm perceptions, but it provides an important update to previous findings. In this case, when the *Dobbs v. Jackson Women's Health Organization* ruling curtailed rights and ran counter to majority public opinion, perceived social norms shifted away from the Court and in the direction of majority opinion (supporting legalized abortion).

By contrast, previous work¹⁵ showed that more popular rulings, such as the ruling that legalized same-sex marriage, shifted perceived social norms supporting same-sex marriage in the same direction as the Court ruling, leaving the direct and indirect pathways of influence indistinguishable.

Second, this research highlights the indirect influence of the Court and specifically the role of media responses to a Court ruling in the formation of norm perceptions. Our television and social media analyses suggest that perceptions of social norms may have been influenced more by media coverage than by the Court itself. We evaluated this claim on Twitter, a platform that nearly 23% of Americans used in 2022²⁷. While people still may be influenced by the Court for matters of understanding constitutionality and the specifics of the case on which the Court is deciding, they may be using social media to gauge where the public stands on an issue, particularly when social media provide abundant evidence that the Court's ruling runs counter to majority public opinion. In sum, our media analysis supplies unique evidence for previous hypotheses about the indirect influence of the Court, showing how Court rulings might stimulate people's attention to the content of media coverage, which influences perceptions of norms.

Third, this research shows that Court rulings can polarize the public in their views of the Court itself, despite a great deal of scholarship positing that the Court's public standing is robust to unpopular rulings^{22,24}. For Republicans, more of whom tended to have an anti-*Roe v. Wade* positioning prior to the ruling, legitimacy trended slightly upward. But for Democrats, who are much more likely to oppose the overturning of *Roe v. Wade* prior to the ruling, perceptions

of Court legitimacy rapidly declined following the leak and ruling. Interestingly, Democrats' perception of fetal age of viability decreased despite reporting lower levels of Court legitimacy. In contrast to positivity theory, or the claim that belief in the Court's legitimacy is largely resistant to adverse rulings²⁵, this study shows that the Court's legitimacy is not bulletproof and that major decisions have the potential to reduce diffuse support for the Court.

Fourth, it suggests not just that there are limits to the Court's direct impact, but that people can conceptually distinguish ideas about statements about legality (and thus, in this case, about the Constitution) from their personal attitudes. There appears to be an important distinction between people's willingness to be persuaded by the Court on matters of primarily legal interpretation (that is, whether *Roe v. Wade* should be overturned) versus their beliefs about abortion itself. We found some evidence that the Court directly influenced ideas about the narrow topics of constitutional and legal issues, which befits the Court's role as interpreter of the Constitution. For example, it is likely that the framing of *Dobbs v. Jackson Women's Health Organization* anchored the public on the 15-week gestational window as a critical time for ending pregnancies. However, we showed the limits of the Court's legitimating capacity by observing no meaningful effects of the Court ruling over personal attitudes towards abortion.

While the fact that the *Dobbs v. Jackson Women's Health Organization* decision was surprisingly leaked offers advantages, it can also make interpreting the results challenging. Specifically, if the leak itself, rather than the content of the leaked draft opinion, made people distrust the operations of the Court or made people view the opinion as 'unofficial', then before and after changes in norm perceptions and constitutional views could reflect both evaluations of the outcome and evaluations of the process. We believe that this concern is minimized by this time series measure of perceived Court legitimacy. If the act of the leak de-legitimized the Court and the unofficial ruling, then we would expect partisans to react to the leak in similar ways. That Democrats and Republicans were polarized after the leak with respect to Court legitimacy suggests that evaluations of the outcome on abortion rights overshadowed any procedural concerns. Moreover, our evidence suggested that the Court's leak did not de-legitimize it to the extent that it could not spark a change in people's perceptions of abortion in the USA.

Together, these findings contribute to our understanding of Supreme Court influence: that its direct effect is highly circumscribed, particularly in an era where the Court does not reflect average Americans' views, and that its indirect effects are probably refracted through salient and strong reactions broadcast through the media.

Methods

The data for this project were collected in the USA by local scholars. Institutional Review Boards (IRBs) at Princeton (IRB no. 11816), Stanford (IRB no. 55200), Harvard (IRB no. 21-0341), Dartmouth (IRB no. 00032522) and University of Texas (IRB no. 00002888) approved our research design. All surveys were administered online by YouGov. Participants provided informed consent to participate in each survey wave. YouGov awards points for participation, which can be exchanged for different rewards. We awarded 1,000 points for participation in each wave. Panellists received an additional 3,000 points for returning to participate in wave 2 and an additional 4,000 points for returning for wave 3.

We used an interrupted time series design to estimate the effects of two consecutive events involved in the US Supreme Court ruling on *Dobbs v. Jackson Women's Health Organization*. The first event was the leak of the draft opinion on 2 May 2022; the second was the announcement of the final ruling on 24 June 2022.

The data consist of responses to three waves of similar surveys administered online by YouGov. Invitations to participate were sent to a sample of US adult residents selected from YouGov's main online opt-in panel to be nationally representative of all US residents.

The sample was weighted according to sex, age, ethnicity, education and geographical region based on the American Community Survey and the 2020 Presidential vote (or non-vote), and registration status. At waves 2 and 3, a portion of the sample was recontacts from the previous wave and made up our panel sample (the wave 2 recontact rate from wave 1 was 83% and the wave 3 recontact rate from wave 1 was 74%). Descriptive statistics of the three samples can be found in the Supplementary Information, Section 1. All analyses applied post-stratification weights provided by YouGov. Applying these weights ensured that the survey sample matched the target sample given non-response.

To estimate the effects of the leak, we recontacted a sample of 2,133 respondents who participated in a YouGov survey fielded in April 2022 (1 month before the leak) about their perceptions of the Supreme Court and of upcoming Court cases. We call the before leak survey wave 1. All respondents were American adults who provided consent at the start of each survey. On 13 May 2022 (after the leak but before the ruling), we invited this sample to complete a longer version of the survey with more items assessing personal opinions and norm perceptions about abortion. We simultaneously collected an additional nationally representative sample of 5,000 respondents at this time. The panel recontact and the fresh cross-section constitutes wave 2. On 27 June, 3 days after the announcement of the *Dobbs v. Jackson Women's Health Organization* ruling, we recontacted panel participants who had responded to waves 1 and 2 and collected an additional nationally representative cross-section of 5,107 respondents (wave 3). At each recontact, panel participants were offered a large additional bonus of US\$4.00, which accounts for the relatively low attrition rate of 25.6% from panel wave 1 through to wave 3. Sample demographics are presented in Supplementary Table 1.

Survey items

From the three surveys, we estimated the impact of the leaked and official Court ruling on the following categories of items.

Norm perceptions on abortion. In waves 2 and 3, we asked participants about the extent to which other people in America supported legal access to abortion and were morally opposed to abortion.

Perceptions of the Supreme Court. Across three waves, we asked participants five questions about the Court's legitimacy, which were averaged into a single index of perceived Court legitimacy. We asked participants whether judges at odds with the people should be removed, if the Supreme Court was too independent, if the Supreme Court should be done away with if they make rulings that most people disagree with, if the Court can usually be trusted to make rulings that are right for the country and whether the Court gets too mixed up in politics. Additionally, we asked participants whether the size of the Court should be increased and whether Supreme Court justices should have term limits.

Personal attitudes towards abortion. In waves 2 and 3, we asked participants about their personal attitudes towards abortion morality and legality. All respondents indicated whether they thought a woman should be able to legally choose to have an abortion and the extent to which they are morally opposed to abortion.

Views on the legality and constitutionality of abortion. Across three waves, we asked participants about their views on the constitutionality of abortion. We distinguished between these kinds of ideas about legal issues from explicitly personal opinions about whether people should access abortion and whether it is moral. All respondents indicated whether they thought the Mississippi law banning abortion after 15 weeks violated the Constitution or not, and whether they thought the Supreme Court should overturn *Roe v. Wade*. In the last two waves, we asked participants to indicate the gestational age at which a fetus is

considered a life. Because many people may not have a formed view about life and gestational age, we were interested to test whether the *Dobbs v. Jackson Women's Health Organization* case would anchor people on 15 weeks, given this was the case's threshold for fetal viability.

Analytic strategy

We pre-registered our survey and analysis plan immediately after the leak and before the initial recontact of the panel and the new cross-sectional survey at wave 2. The complete pre-registration can be found online at <https://doi.org/10.17605/OSF.IO/DS6KB> or in the Supplementary Information, Section 10. For outcomes measured in all three waves, we estimated the effect of the leak and the additional effect of the ruling on outcomes. For variables measured only in waves 2 and 3, we could only estimate the effect of the ruling. In panel analyses, we stacked individual responses and focused on within-subject variation by including individual fixed effects. All data analysis was conducted using R v.4.1. In all analyses, we estimated robust standard errors. For robustness, we also estimated a model that included a lagged outcome (three wave variables in the panel sample only). Respondents with missing outcome data were dropped from the analyses. We note three deviations from our pre-registered plan: (1) we pre-registered a third model that would control for the day-of-interview but decided not to estimate this model because of a lack of variation in time within wave; (2) we excluded non-abortion-related analyses from this article for coherence; (3) we did not collect an additional three waves of data because of funding shortage.

Reporting summary

Further information on research design is available in the Nature Portfolio Reporting Summary linked to this article.

Data availability

Data are available on the Harvard Dataverse (<https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/C9SPVB>).

Code availability

All analysis scripts are available on the Harvard Dataverse (<https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/C9SPVB>).

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Author contributions

C.S.C. is the lead and corresponding author. The order of all other authors was determined by the AEA randomization tool (confirmation code: wcrxOzTKmjLV). C.S.C., E.L.P. and S.J.W. conceptualized the study and designed the wave 2 and 3 surveys.

C.S.C., E.L.P., S.J.W., S.J., M.S. and N.M. refined the wave 2 and 3 surveys based on the US Supreme Court SCOTUSPoll wave 1 survey previously designed and published by N.M., S.J. and M.S. C.S.C., E.L.P., S.J.W., S.J., M.S. and N.M. contributed to the pre-analysis plan. C.S.C., E.L.P., S.J.W., S.J. and N.M. analysed the data. C.S.C., E.L.P., S.J.W., S.J., M.S. and N.M. wrote the paper. C.S.C. and S.J.W. wrote the Supplementary Materials.

Competing interests

The authors declare no competing interests.

Additional information

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Population characteristics	The intention of the survey sampling was to obtain a representative sample of U.S. adults (18 years of age or older).
Recruitment	Subjects were recruited by a survey vendor---YouGov. This is an opt-in panel that could bias results, but YouGov employs sample matching and weighting techniques to minimize any bias.
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Research sample	Representative sample of US adult population over the age of 18. This corresponds to the voter eligible American public that is the target of our analysis. YouGov does not employ probability sampling, but rather sample matching and weighting techniques to achieve representativeness.
Sampling strategy	Invitations to participate were sent to a sample of U.S. adult residents selected from YouGov's main online opt-in panel to be nationally representative of all U.S. residents. The sample was weighted according to gender, age, race, education, and geographic region based on the American Community Survey, as well as 2020 Presidential vote (or non-vote), and registration status. At waves 2 and 3, a portion of the sample was recontacts from the previous wave and made up our panel sample (the wave 2 recontact rate from wave 1 was 83% and the wave 3 recontact rate from wave 1 was 74%). Sample size was set by budget constraints. Post-hoc power analysis shows that we are overpowered at standard levels.
Data collection	Invitations to participate were sent to a sample of U.S. adult residents selected from YouGov's main online opt-in panel to be nationally representative of all U.S. residents. Data was collected via an online survey. No researchers or third parties were in respondents' homes when data was collected. Respondents were compensated in accordance with their agreement with YouGov, the survey vendor. The researchers did not compensate respondents directly.
Timing	Data were collected in April 2022, May 2022, and June 2022.
Data exclusions	No data were excluded.
Non-participation	We do not have these data. They were not reported to us by the survey vendor.
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