Decomposing Trends in Attitudes Toward Gay Marriage, 1988–2006*

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**Objective.** The objective of this article is to examine the trend in attitudes toward gay marriage through the analysis of data from the General Social Survey. **Methods.** Using linear decomposition techniques, I explain the change in attitudes toward gay marriage from 1988 to 2006. **Results.** Attitudes significantly liberalized over time; 71 percent opposed gay marriage in 1988, but by 2006, this figure dropped to 52 percent. Approximately two-thirds of this change was due to an intracohort change effect, or individuals’ modifying their views over time, and one-third was due to a cohort succession effect, or later cohorts replacing earlier ones. This pattern was replicated across many subgroups of the U.S. public, including age, sex, residential, educational, and religious groups. **Conclusion.** The results suggest that the use of the “equality/tolerance” framing of gay marriage by its supporters and other societal events or “moments” may have convinced some people who used to disapprove of gay marriage in 1988 to approve of it by 2006.

On February 24, 2004, President George W. Bush announced his support for an amendment to the U.S. Constitution by saying that “[t]he union of a man and woman is the most enduring human institution, honored and encouraged in all cultures and by every religious faith. Ages of experience have taught humanity that the commitment of a husband and wife to love and to serve one another promotes the welfare of children and the stability of society. Marriage cannot be severed from its cultural, religious and natural roots without weakening the good influence of society” (Bush, 2004). Believing that marriage was under attack by “activist” judges, courts, and local officials, President Bush and others felt that the only way to “prevent the meaning of marriage from being changed forever” was to add such a constitutional amendment, a course of action that President Bush admitted “is never to be undertaken lightly” (Bush, 2004). How could such an “enduring, . . . honored and encouraged” institution with deep “cultural, religious and natural roots” (Bush, 2004) be in such jeopardy? What could threaten something so

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revered? For many, gay marriage\(^1\) provides that threat. Indeed, to some, gay marriage does not just threaten marriage, but it is also a threat to U.S. society and is symptomatic of the decline and destruction of U.S. culture.

Just one week before the president’s speech in 2004, a Gallup poll found that a majority (64 percent) of Americans did not support equal marriage rights for gay men and lesbians; about one-third (32 percent) supported gay marriage rights at that time (Gallup Poll News Service, 2007). A week before that, Gallup had found that slightly more than half (53 percent) of people polled supported a constitutional amendment defining marriage as “being between a man and a woman.” Support for a constitutional amendment slackened slightly in the ensuing months, that is, until March 2005 when, for one Gallup poll, favorability reached an apex of 57 percent.\(^2\) Gallup’s poll data on gay marriage attitudes only extend back to 1996, when 68 percent of those surveyed thought “marriages between homosexuals . . . should not be recognized by the law as valid.” In the 10 years that Gallup has been asking about gay marriage, overall opposition to it has decreased by 10 percent, with some vacillation in the intervening years.

Using multiple data sources, Brewer and Wilcox (2005) were able to construct a richer but only slightly longer data trail. With the exception of the General Social Survey (GSS) (Davis, Smith, and Marsden, 2008) data used in the present research, data on gay marriage attitudes were “relatively sparse before 2003” (Brewer and Wilcox, 2005:601). A handful of polls from the first half of the 1990s found less than one-third of respondents supporting and approximately two-thirds opposing gay marriage. All the data series showed a general, albeit modest, increase in accepting attitudes toward gay marriage.

The trend in attitudes toward gay marriage mirrors in direction, if not in magnitude, changing public opinion on homosexuality.\(^3\) The latter half of the 20th century saw increased acceptance of homosexuality, although substantial advancement did not become evident until the 1990s (Brewer, 2003; Brewer and Wilcox, 2005; Craig et al., 2005; Hicks and Lee, 2006; Yang,

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\(^1\)Several terms are used to describe marriage between two adults of the same sex. I use the term “gay marriage” to avoid more essentialistic (e.g., homosexual and same-sex) or sometimes derogatory (e.g., queer) terms.

\(^2\)Respondents’ opinions on gay marriage are slightly more favorable when pollsters ask questions about gay relations and other rights (e.g., equal job opportunities) before asking about gay marriage, that is, when gay marriage is framed as an equal rights issue. Support for a constitutional amendment is also reduced when the question emphasizes restrictions (e.g., saying the amendment would “ban” or make gay marriage “illegal”), as opposed to focusing on how the amendment would “define” marriage (Gallup Poll News Service, 2007).

\(^3\)Criticisms of survey research rightly point to problems measuring opinions on controversial topics. Surveys sometimes pose questions on topics that are unfamiliar to respondents or for which the respondent has no set view—known as attitudinal ambivalence, which is “fairly common” for gay issues (Craig et al., 2005). The “unfamiliarity” problem is particularly pertinent for earlier data on gay marriage attitudes (when few people may have been acquainted with the concept), producing probably less reliable data at earlier time points. The second issue, “ambivalence,” was tested by Craig et al. (2005), and they found that, by 2002, respondents were less ambivalent toward gay marriage than toward military service, adoption, Boy Scouts, and other gay rights issues.
1997). Views on the legality of “homosexual relations between consenting adults” and the acceptability of homosexuality as an “alternative lifestyle” have shown a good deal of liberalization since the late 1970s and early 1980s (Gallup Poll News Service, 2007). The clearest trend concerns opinions regarding gays’ “equal rights in terms of job opportunities,” which has shown steady increase from 56 percent support in 1977 to 89 percent in 2004 (Gallup Poll News Service, 2007). Still, there has been some suggestion of a backlash, particularly over gay marriage (Brewer and Wilcox, 2005; Hicks and Lee, 2006), and anti-gay discrimination and violence remain.

In this article, I examine attitudes toward gay marriage. Previous studies have analyzed recent attitudes toward gay marriage (e.g., Craig et al., 2005; Olson, Cadge, and Harrison, 2006) and the effect of gay marriage attitudes and amendments on the 2004 U.S. presidential election (e.g., Lewis, 2005; Lovett and Jordan, 2005). To my knowledge, no one has sought to decompose those trends; indeed, trend analyses of attitudes toward homosexuality in general are relatively rare (see also Hicks and Lee, 2006). Therefore, my research has the following goals: (1) to describe U.S. attitudes toward gay marriage, particularly how those attitudes have changed over time; (2) to determine the sources of change in gay marriage attitudes, cohort succession or intracohort change; and (3) to discern if the change in gay marriage attitudes occurred equally across different social groupings and if the mechanics behind such attitude change were similar across these different social groupings. I address these goals by analyzing data from the 1988 and 2006 General Social Surveys (Davis, Smith, and Marsden, 2008).

Gay Marriage Attitude Change

One key element to explaining why attitudes toward gay marriage could change over time is that the “framing” of gay marriage itself has changed over time. The framing perspective of attitude formation and change embraces a constructionist approach, in that individuals do not merely respond to media discourse but actively engage it to generate their own beliefs (Gamson, 1992). The content of media discourse represents only the starting point of the constructionist framing process; the end point—general societal opinion—represents an accumulation of individuals interacting with that discourse using their own personal experiences and learned cultural expectations to construct their attitudes (Gamson, 1992; Price, Nir, and Cappella, 2005).

When it comes to gay marriage, two media frames have been in competition—a “morality” frame and an “equality” or “tolerance” frame (Fetner, 2001; Hull, 2001; Price, Nir, and Cappella, 2005). The morality frame is used by those who oppose gay marriage. It paints gay marriage as a threat to traditional religion and values. On the other hand, the equality/tolerance frame is used by those who support gay marriage. This framing likens marriage (or civil unions) for gay men and lesbians to heterosexual marriage.
and positions gay marriage as a civil rights or acceptance issue. The gay rights movement employed the equality frame from the beginning, and the first anti-gay conservative Christian movement—formed in 1977 by Anita Bryant as a response to successes of the gay rights movement—used religion, tradition, and morality to challenge that framing (Fetner, 2001).

Since then, various cultural events covered by the media and entered into public discourse have contributed to these frames. The HIV/AIDS pandemic, the 2000 and 2004 presidential elections, the “ex-gay” conversion movement, and certain court cases and legislation (Defense of Marriage Act, Don’t Ask/Don’t Tell, etc.) are used in or employed a morality framing and could have moved opinion in a more conservative direction over time. On the other hand, the 1998 murder of Matthew Shepard, the gay rights movement, various entertainments (Ellen, Will and Grace, Queer Eye for the Straight Guy, Brokeback Mountain, etc.), the decoupling of HIV/AIDS and homosexuality, that fewer people think that homosexuality is a “choice,” and the “outings” of celebrities and other gay men and lesbians are used in or employed an equality/tolerance framing and could have had a more liberalizing effect on opinion over time.

In general, a civil rights framing of various social problems has dominated U.S. discourse since the 1960s (Hull, 2001), suggesting that there should have been a trend toward greater approval of gay marriage. Yet, Hull’s (2001) research on the fight over gay marriage in Hawaii at the time of the Baehr v. Lewin decision finds that members of the general public do not always accept the dominant framings in the media, but sometimes offer their own frame based on their own interpretation of events. Indeed, the equality/tolerance frame was unsuccessful in Hawaii at the time (see also Gamson, 1992). However, as of the 2000 presidential election, both frames were in use and both were achieving some success (Price, Nir, and Cappella, 2005). In this article, I do not analyze the content of media discourse on gay marriage or the actual framing of gay marriage by social movement organizations; instead, I focus my attention on attitudes toward gay marriage, which may respond to messages in the public discourse, particularly frames, as well as events and other cultural developments.

### Measuring Gay Marriage Attitude Trends

An attitude trend occurs when disposition toward an issue monotonically, or consistently, improves or worsens throughout a given time period (Firebaugh and Davis, 1988). Such trends are attributed to two general processes: population changes or individuals’ changing views (Firebaugh, 1989). Population changes are societal-level, demographic shifts driven by the mechanism of cohort succession.4 That is, as successive birth cohorts replace

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4 Cohorts are groups of people who share a defining characteristic at a specific point in time. Research on attitude trends uses birth cohorts, where members share the same year of
older cohorts, social attitudes come to reflect the sentiments of the later cohorts (Firebaugh, 1989). On the other hand, “individuals’ changing views” refers to the tendency of people to change their own minds over time. This kind of process focuses on changes within cohorts, instead of across them as with cohort succession, and is thus termed intracohort change.5

Cohort succession leads to a slow pace of change because it involves differences across birth cohorts and the replacement of older cohorts by younger cohorts. Long-term ideological changes, such as those that are usually responsible for cohort succession effects, are reflections of several long-term social and cultural developments. Since World War II and more generally throughout the 20th century, three general attitude shifts have driven U.S. opinion on various social issues; individualism, secularization, and materialism (Treas, 2002). Each of these shifts is driven by the forces of modernity, and each tends to have liberalizing effects on social attitudes. For example, the sexual revolution of the 1960s and 1970s exhorted sexual liberalism over sexual conservatism (Luker, 2007). Succeeding birth cohorts are exposed to these new ideologies, so that, with the process of cohort succession, general opinion comes to mirror these ideologies. In addition to demographic shifts associated with cohort succession, individual-level changes are also responsible for attitudes trends. As individuals live their lives they are exposed to different people and events, and these experiences may affect their opinions. Therefore, intracohort change may also be responsible for attitude change on gay marriage.

As discussed in the previous section, framing shifts and societal events may explain why gay marriage attitudes have changed over time. The impact of these could be reflected in the effects of cohort succession (as younger generations that have been exposed to different socializing experiences replace older generations) or intracohort change (as individuals change their minds about an issue, possibly in response to framing and cultural shifts). The forces of cohort succession and intracohort change address how gay marriage attitudes have changed.

Additional Considerations

On a more individual level, certain characteristics have been shown in previous research to be associated with attitudes toward gay men and lesbians, in general, and attitudes toward gay marriage, more specifically. These birth, but cohorts can be defined by other shared experiences, such as graduation from high school or entrance into the labor force (Firebaugh, 1989; Glenn, 2005).

5The effect of intracohort change presumes that each repeated cross-section is an accurate representation of the population so that any attitudinal change witnessed can be assumed to be representative. However, any witnessed attitudinal change in subsequent samples could be attributed to sampling error, differential mortality, and immigration/migration. (I thank a reviewer for making this point.)
characteristics include age, sex, race/ethnicity, region, size of place, education, religion and religiosity, and political beliefs (Herek, 2000; Olson, Cadge, and Harrison, 2006). Based on this research, we know that younger people, women, city dwellers, and the more educated tend to be more supportive of gays and lesbians, homosexuality, and gay marriage. We also know that African Americans, southerners, evangelicals, and Republicans tend to be less supportive. Because these characteristics have been shown to be related to gay marriage attitudes, I divide the sample by these group characteristics to determine if gay marriage attitudes changed differently (or did not change at all) across these groups.

Methods

Data

I use data from the General Social Survey (Davis, Smith, and Marsden, 2008). The GSS is a national probability sample of noninstitutionalized English-speaking adults. Prior to 1994, the GSS was conducted yearly and included information on approximately 1,500 respondents every year. Thereafter, the GSS was administered biennially to approximately 3,000 respondents until 2004 and to approximately 4,500 respondents in 2006. The question on gay marriage was included in the 1988, 2004, and 2006 surveys. Although the entire sample sizes vary substantially between 1988 ($N=1,481$), 2004 ($N=2,812$), and 2006 ($N=4,510$), the gay marriage question was asked of relatively more similarly sized groups of people in 1988 ($N=1,307$), 2004 ($N=1,184$), and 2006 ($N=1,982$). Most of the analysis focuses on the end points of the trend, 1988 and 2006. Because the cross-sections are relatively equivalent after missing data deletions, the data do not require weighting (Firebaugh and Davis, 1988). In addition to substantial sample sizes, the GSS are the best data available for this project because they provide the earliest national-level probability data on the topic.

Measures

**Attitudes Toward Gay Marriage.** Respondents were asked to agree or disagree with the following statement: “Homosexual couples should have the right to marry one another.” Response categories ranged from strongly agree (1), to agree (2), neither agree nor disagree (3), disagree (4), or strongly disagree (5). I recoded the variable such that disagree and strongly disagree were coded as 1 (63.1 percent) and the remaining answer categories were coded as 0 (37.9 percent). Respondents who indicated that they “couldn’t choose” among the responses or provided any other invalid response were set to missing.
**Birth Cohort and Age.** The GSS collects the year of birth and age for each respondent. In 1988, respondents’ birth year ranged from 1899 to 1970, and in 2006 it ranged from 1917 to 1988. In both years, age ranged from 18 to 89, with a mean age slightly over 45 ($SD = 17.0$).

**Additional Variables.** Several additional variables from the GSS were used to divide the sample into theoretically interesting subgroups. These variables, and the subgroups they define, include: sex (males and females), race/ethnicity (white, black, and other), region (Northeast, South, Midwest, and West), size of residential area (country/town/suburb and medium/large city), education (high school graduate or less and junior college or more), religion/religiosity (evangelical Protestant or not), and political beliefs (Democrat and Republican). For the region categories, I combined “New England” and “Middle Atlantic” for the northeastern category; “South Atlantic,” “East South Central,” and “West South Central” for the southern category; “East North Central” and “West North Central” for the midwestern category; and “Mountain” and “Pacific” for the western category. For the size of residential area, I combined the “open country,” “smaller areas,” “town greater than 2,500 population,” “city 10,000–49,999 population,” “suburb of a medium city,” and “suburb of a large city” into the country/town/suburb category and the “unincorporated medium city,” “unincorporated large city,” “city 50,000–250,000 population,” and “city greater than 250,000 population” into the medium/large city category. For the religion/religiosity categories, I used the RELTRAD (Steensland et al., 2000) procedure to distinguish evangelical Protestants from other religious groups. For the political categories, I combined strong Democrats, not strong Democrats, and “independent, near Democrat” into the Democrat category and strong Republicans, not strong Republicans, and “independent, near Republican” into the Republican category.

**Analytic Technique**

I decomposed the change in attitudes toward gay marriage using the “linear decomposition” technique described by Firebaugh (1989; Firebaugh and Davis, 1988) and used by him to examine changes in attitudes about race. Like other decomposition techniques, Firebaugh’s method partitions attitude change into “cohort succession” and “intracohort change” components by regressing gay marriage attitudes on year of birth ($cohort$) and year of survey ($year$):

$$y = a + b_1 \text{year} + b_2 \text{cohort} + e.$$  

The two variables, $year$ and $cohort$, are interval-ratio-level variables, and the dependent variable, gay marriage attitudes, is a dummy variable; there-
fore, I used logistic regression to model the relationships. Logistic regression uses a maximum likelihood function to fit a predictive model for dummy-coded outcome variables. Once the logistic regression equation has been specified, the log-odds coefficients are used to estimate the two change components:

intracohort change $= b_{\text{year}} \Delta t$  
cohort succession $= b_{\text{cohort}} \Delta \bar{c}$,

where $\Delta t$ is the number of years in the trend ($t_2 - t_1 = 2006 - 1988 = 18$) and $\Delta \bar{c}$ is the difference in the cohort means ($\bar{c}_{2006} - \bar{c}_{1988}$). In the absence of the effects of interaction and nonlinearity, the two components sum to the total change in attitudes (Firebaugh, 1989):

$\Delta y = b_{\text{year}} \Delta t + b_{\text{cohort}} \Delta \bar{c}$,  

where the change in gay marriage attitudes ($\Delta y$) is equal to the difference in the 2006 and 1988 logits. However, because this situation is rare, the remaining difference, or residual, is obtained by subtracting the change components from the total change in attitudes:

$\Delta y = b_{\text{year}} \Delta t + b_{\text{cohort}} \Delta \bar{c} + e$  
$\Delta y - b_{\text{year}} \Delta t - b_{\text{cohort}} \Delta \bar{c} = e$.

The residual change should be small; if it is large, then the model does not fit the linear-additive assumptions of Firebaugh’s (1989) technique.

A similar, regression-based decomposition technique is “regression standardization,” which regresses attitudes on the cohort variable only and uses those results to calculate intracohort change and cohort succession effects. The cohort succession effect is determined as it was with linear decomposition. Intracohort change is calculated by subtracting the cohort succession effect from the total change, with no interaction or residual effect. In contrast to linear decomposition, which pools data for all years, regression standardization requires researchers to select a “standard population” to estimate the regression model (Firebaugh, 1989). “Forward partitioning” regresses attitudes on cohort for 1988 data only, and “backward partitioning” regresses attitudes on cohort for 2006 data only. Although regression standardization treats birth cohort as an interval-ratio-level variable, only linear decomposition treats year as an interval-ratio-level variable as well. Therefore, linear decomposition is preferred over regression standardization.

Firebaugh’s (1989) “linear decomposition” and other “regression standardization” techniques are appealing due to their ease in calculation but, as Treas (2002) points out, attitude trends are not always linear and monotonic. In such situations, algebraic decomposition may be more appropriate.

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6 Where the logit is calculated as the natural log of the probability of disagreeing ($p$) divided by the probability of not disagreeing ($1 - p$ or $q$).
The first component represents the amount of mean change due to intra-cohort change; the second component to cohort succession; and the third component to an interaction or joint effect:

\[
\Delta y = \sum_j p_j \Delta \bar{y}_j + \sum_j \bar{y}_j \Delta p_j + \sum_j \Delta \bar{y}_j \Delta p_j,
\]

where \( \Delta y \) is the difference in mean attitudes toward gay marriage across the two time points; \( \Delta \bar{y}_j \) is the change in mean attitudes over time for a particular cohort \( j \); and \( \Delta p_j \) is the change in cohort \( j \)'s proportionate representation. The remaining values, \( p_j \) and \( \bar{y}_j \), can be estimated three ways. “Forward partitioning” uses 1988 data, so that \( p_j \) becomes cohort \( j \)'s proportionate representation in 1988, and \( \bar{y}_j \) becomes the mean value on the dependent variable in 1988. Similarly, “backward partitioning” uses 2006 data. A third, and usually more preferred approach (Firebaugh, 1989), is that forwarded by Kitagawa, which uses averages to estimate these two values:

\[
p_j = \frac{(p_{j2006} + p_{j1988})}{2}
\]

\[
\bar{y}_j = \frac{(\bar{y}_{j2006} + \bar{y}_{j1988})}{2}.
\]

Unlike the other two partitioning methods, Kitagawa’s method of decomposing attitude trends results in no residual or interaction term.

One problem with algebraic decomposition is that it can be used only for cohorts that were present in the data at all time points. In using this decomposition technique, the first 18 birth cohorts (1899 through 1916) and the last 18 birth cohorts (1971 through 1988) were lost due to missing data at either the 2006 or the 1988 survey, respectively. One additional birth cohort, 1920, was lost because none of the 1988 respondents were born that year. The sample sizes for the algebraic decompositions were thus reduced from 809 in 2006 to 580 and from 1,046 in 1988 to 947. Losing the oldest and youngest respondents in this way may reduce the cohort succession effect. However, because the majority of cohorts (1917 through 1970) and respondents (1,527) remained in the analysis, any reduction in effect should be minimal.

Results

Disapproval of gay marriage rights has moderated significantly between 1988 and 2006. In 1988, a large majority (71.4 percent) of respondents disagreed that homosexual couples should be allowed to marry. By 2006, though, that figure had dropped by nearly 20 percentage points to 52.4 percent, and the reduction in disapproval is seen throughout all the response
categories prior to the variable’s dichotomization. In 1988, 45.4 percent of respondents “strongly disagreed” that gay men and women should have the right to marry and 26.0 percent “disagreed,” but in 2006, these figures had each dropped by approximately 10 percent (34.5 percent “strongly disagreed” and 17.9 percent “disagreed”). In addition, a smaller percentage of the sample chose the undecided or middle category of “neither agree nor disagree” (15.2 percent in 1988 and 12.7 percent in 2006). Moreover, both agreement categories increased by approximately 10 percent. In fact, the largest percentage change across the two years is found for the “strongly agree” category, which more than tripled from 3.6 percent in 1988 to 15.8 percent in 2006.

Figure 1 shows how gay marriage attitudes have changed over time. Younger cohorts are more approving of gay marriage. The downward trend is fairly linear and monotonic. Most of the cohort means that fall farther from the summary regression line in Figure 1 reflect the attitudes of smaller cohorts. The patterns found in Figure 1 strongly suggest the importance of cohort succession to the trend in gay marriage attitudes. This is because the younger cohorts, which will inevitably replace the older cohorts, are more approving of gay marriage. However, controlling for survey year in Figure 2 suggests that intracohort change also contributes to the trend because the 2006 regression line is consistently lower than the 1988 regression line, even for the oldest cohorts. Only the mathematical decompositions to follow can determine the exact contribution of each change component to the attitude trend.

FIGURE 1
Gay Marriage Attitudes by Year of Birth (GSS) (Weighted by Cohort Size)
The decompositions in Table 1 show that intracohort change was responsible for a majority, nearly two-thirds, of the change in gay marriage attitudes, and cohort succession was responsible for the remaining third of the decline, meaning that attitudinal change is due more to how individuals have changed their minds about gay marriage over time, than to the “replacement” of the older and less tolerant by the younger and more tolerant. (The results reported in Appendix A demonstrate that the decomposition technique has little effect on these substantive interpretations.) This general pattern in the attribution of cause extends to some of the other attitude trends described in Table 1, in particular, to attitudes toward gay college teachers, interracial marriage, and the morality of homosexuality. For the remaining attitudes, intracohort change and cohort succession contribute fairly equally to the change over time. The attitudes demonstrating the greatest change over time—gay marriage, morality of homosexuality, college teachers, and interracial marriage—are also the attitudes that owe a much greater degree of their trend to intracohort change. Whereas the attitudes showing the least change over time—library book, community speech, and the gay rights index—do not. Not coincidentally, it seems, it is this latter set of variables that were already relatively more favorable at the beginning of the period. Perhaps those individuals whose attitudes on these issues were more open to change had previously modified their positions, leaving cohort succession to take a larger proportionate role. The decompositions use only the starting and ending points of the trends. I investigated the effect this data

FIGURE 2
Gay Marriage Attitudes by Year of Birth (GSS)

![Gay Marriage Attitudes by Year of Birth (GSS)](image_url)
TABLE 1
Linear Decomposition of Change in Attitudes Toward Gay Marriage Rights, Morality of Homosexuality, Gay Civil Rights, and Interracial Marriage, GSS

<table>
<thead>
<tr>
<th></th>
<th>1988 Mean</th>
<th>2006 Mean</th>
<th>Rate of Change (^{a})</th>
<th>Total Change (^{b})</th>
<th>Intracohort Change Effect (b_{\text{year} \Delta t})</th>
<th>Cohort Succession Effect (b_{\text{cohort} \Delta t})</th>
<th>Residual Effect (^{c})</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gay marriage rights (1 = disagree)</td>
<td>0.714</td>
<td>0.524</td>
<td>-0.011</td>
<td>-0.819(^{d})</td>
<td>-0.552</td>
<td>-0.287</td>
<td>0.020</td>
</tr>
<tr>
<td>Morality of homosexuality(^{e}) (1 = always wrong)</td>
<td>0.768</td>
<td>0.551</td>
<td>-0.012</td>
<td>-0.992(^{d})</td>
<td>-0.675</td>
<td>-0.348</td>
<td>0.031</td>
</tr>
<tr>
<td>Book in library(^{f}) (1 = remove)</td>
<td>0.373</td>
<td>0.240</td>
<td>-0.007</td>
<td>-0.633(^{d})</td>
<td>-0.323</td>
<td>-0.329</td>
<td>0.019</td>
</tr>
<tr>
<td>Speech to community(^{g}) (1 = not allow)</td>
<td>0.274</td>
<td>0.166</td>
<td>-0.006</td>
<td>-0.640(^{d})</td>
<td>-0.307</td>
<td>-0.344</td>
<td>0.011</td>
</tr>
<tr>
<td>College teachers(^{h}) (1 = not allow)</td>
<td>0.405</td>
<td>0.210</td>
<td>-0.011</td>
<td>-0.940(^{d})</td>
<td>-0.590</td>
<td>-0.385</td>
<td>0.035</td>
</tr>
<tr>
<td>Gay civil rights index(^{i})</td>
<td>4.051</td>
<td>3.609</td>
<td>-0.025</td>
<td>-0.443</td>
<td>-0.240</td>
<td>-0.203</td>
<td>0.000</td>
</tr>
<tr>
<td>Interracial marriage law(^{j}) (1 = yes)</td>
<td>0.225</td>
<td>0.096</td>
<td>-0.009</td>
<td>-1.006(^{d})</td>
<td>-0.604</td>
<td>-0.484</td>
<td>0.082</td>
</tr>
</tbody>
</table>

\(^{a}\)Rate of change is calculated by dividing the mean change by the number of years, 18 for the gay marriage rights, morality of homosexuality, and gay civil rights variables and 14 for the interracial marriage law variable.

\(^{b}\)Total change is calculated by subtracting 1988 data from 2006 data, except for interracial marriage law variable, where change is calculated by subtracting 1988 data from 2002 data.

\(^{c}\)The residual effect is calculated by subtracting the intracohort change and cohort succession effects from the total change.

\(^{d}\)Total change is the difference in the logits, where the logit is calculated as \(\ln \left( \frac{p}{1-p} \right)\).

\(^{e}\)The morality of homosexuality question asks if “sexual relations between two adults of the same sex” is always wrong, almost always wrong, sometimes wrong, or not wrong at all \((N = 2,845)\).

\(^{f}\)The book in library question asks if a book in favor of homosexuality should be removed from the library \((N = 2,905)\).

\(^{g}\)The speech to community question asks if a homosexual should be allowed to give a speech in the respondent’s community \((N = 2,899)\).

\(^{h}\)The college teachers question asks if a homosexual should be allowed to teach in a college or university \((N = 2,884)\).

\(^{i}\)The gay civil rights index combines three variables: whether a book in favor of homosexuality should be removed from the library (reverse coded), whether a homosexual should be allowed to give a speech, and whether a homosexual should be allowed to be a college teacher \((\alpha = 0.748; N = 2,823)\).

\(^{j}\)The interracial marriage law question asks if the respondent favors laws against marriages between African Americans and whites. This question was not used in 2006 or 2004; 1988 and 2002 data are compared \((N = 1,855)\).
selection had on the results in analyses not presented here (but available on request). The inclusion of all the possible years of data increased cohort succession’s contribution and, in many cases, decreased intracohort change’s contribution. The total impact of this had the greatest effect on the gay rights index and the individual variables that comprise the index. Because only one additional year of data is added to the analysis of gay marriage attitudes, these particular decompositions show little change.

The partialled decompositions in Table 2 address whether the components of attitude change differ across various social groupings. Looking first at the total change in gay marriage attitudes, some groups evidenced more change from 1988 to 2006 than others. The attitudes of younger people, age 18 to 29, changed more than the attitudes of older people, age 30 and over; women’s attitudes changed more than men’s; the attitudes of whites and people of other races and ethnicities changed more than blacks’ attitudes—whose attitudes remained fairly consistent over time; westerners’ attitudes changed less than that of residents in other regions, particularly northeasterners; urbanites’ attitudes less so than nonurbanites’ attitudes; the attitudes of the more educated less than the attitudes of the less educated; evangelical Protestants’ attitudes less than nonevangelicals’ attitudes; and Democrats’ attitudes much more than Republicans’ attitudes. The greatest differences in the degree of attitude change over time are across race, regional, and political categories. Each of these distinctions mirrors research findings on attitudes toward gay men, lesbians, and homosexuality more generally; that is, research has found that young people tend to express less sexual prejudice than older people, women tend to express less than men, and so forth (Herek, 2000). A main reason forwarded for these differences is varying levels of contact with gay men and lesbians across these groups because contact increases identification with gay men and lesbians and thus lessens prejudice against them.

As seen in Table 2, across most groupings, intracohort change is responsible for much more of the trend in gay marriage attitudes than is cohort succession. However, some groups vary from this general pattern. A handful of groups—the young, northeasterners, and the more educated—are characterized by more extreme versions of this pattern. The decomposition for 18–29-year olds is unique, where intracohort change is responsible for over twice the total change because cohort succession has the opposite effect, increasing disapproval of gay marriage instead of decreasing it. For African Americans and for people of other races and ethnicities, the attribution of change is either reversed—albeit to a minor degree—or more equitable, respectively.

**Conclusion**

In setting out to analyze attitudes toward gay marriage, I took a more macro-level approach. The resultant dissection of the attitude trend finds
that increasing approval of gay marriage is less a product of demographic shifts than the accumulation of individual change, even though both contribute to the liberalization of gay marriage attitudes. Suggestive of a generational sea change, younger people are much more approving of gay marriage in 2006 than they were in 1988. Even evangelical Protestants' attitudes have moderated slightly (see also Petersen and Donnenwerth, 1998). At the same time, African Americans and Republicans are somewhat resistant to attitude change on this topic. The use of the “equality/tolerance” framing of gay marriage by its supporters and other societal events or “moments” may have convinced some people who formerly disapproved of gay marriage in 1988 to approve of it by 2006, so much so, in fact, that a majority of some social subgroups—including young adults, members of other races/ethnicities, anyone living outside the southern region of the United States, the more educated, nonevangelicals, and Democrats—approve of gay marriage in 2006. Considering that approval dominated in no subgroup in 1988, this change is quite impressive.

The trend in attitudes toward gay marriage shares some similarities with the trend in attitudes toward gays and gay rights specifically and to other social attitudes more generally. Overall, substantial increases in the acceptance of gay Americans occurred during the 1990s, and cohort succession is partially responsible for that change (see also Andersen and Fetner, 2008; Ruel and Campbell, 2006). Attitude change on gay marriage appears to owe more to the modification of individuals’ thinking, which could be a result of changes in the framing of gay marriage or various societal events (see also Andersen and Fetner, 2008; Loftus, 2001). A comparison of the “gay marriage rights” and “morality of homosexuality” GSS questions provides an interesting test of the juxtaposition of the effect of the “equality” and “morality” views toward gay marriage (see also Loftus, 2001). Both these attitudes liberalized from 1988 to 2006—people were more likely to believe that gay men and lesbians should have the right to marry and were less likely to believe that same-sex sexual relations were wrong—because people changed their minds on these issues. Thus, public opinion has moved toward adopting an “equality” perspective and away from a “morality” perspective.

As the United States expands rights and protections from discrimination and injury to its gay citizens, it joins many other advanced industrialized nations. The United States has lagged behind these countries partly because gay rights have been perceived differently in the United States (Adam, 2003; Smith, 2005). For decades, the dominant perspective for gays and gay rights was one of criminality and immorality (Fetner, 2001; Price, Nir, and Cappella, 2005; Smith, 2005), but once the U.S. Supreme Court struck down sodomy laws in 2003, decades later than many other advanced industrialized nations, that approach has weakened. The gay rights movement has had some success presenting this issue as one of equality and rights. Its efforts, along with the increased visibility of gay men and lesbians and other societal
<table>
<thead>
<tr>
<th></th>
<th>1988 Mean</th>
<th>2006 Mean</th>
<th>Total Change&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Intracohort Change Effect (&lt;em&gt;b&lt;/em&gt;&lt;sub&gt;yearΔt&lt;/sub&gt;)</th>
<th>Cohort Succession Effect (&lt;em&gt;b&lt;/em&gt;&lt;sub&gt;cohortΔc&lt;/sub&gt;)</th>
<th>Residual Effect&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total sample</td>
<td>0.714</td>
<td>0.524</td>
<td>–0.191</td>
<td>–0.552</td>
<td>–0.287</td>
<td>0.020</td>
</tr>
<tr>
<td>Ages 18–29</td>
<td>0.651</td>
<td>0.421</td>
<td>–0.242</td>
<td>–2.115</td>
<td>0.765</td>
<td>0.408</td>
</tr>
<tr>
<td>Ages 30+</td>
<td>0.734</td>
<td>0.546</td>
<td>–0.181</td>
<td>–0.493</td>
<td>–0.354</td>
<td>0.016</td>
</tr>
<tr>
<td>Males</td>
<td>0.756</td>
<td>0.579</td>
<td>–0.178</td>
<td>–0.577</td>
<td>–0.255</td>
<td>0.020</td>
</tr>
<tr>
<td>Females</td>
<td>0.681</td>
<td>0.471</td>
<td>–0.211</td>
<td>–0.569</td>
<td>–0.338</td>
<td>0.032</td>
</tr>
<tr>
<td>White race</td>
<td>0.713</td>
<td>0.498</td>
<td>–0.215</td>
<td>–0.686</td>
<td>–0.247</td>
<td>0.015</td>
</tr>
<tr>
<td>Black race</td>
<td>0.709</td>
<td>0.689</td>
<td>–0.025</td>
<td>–0.352</td>
<td>–0.462</td>
<td>0.719</td>
</tr>
<tr>
<td>Other race</td>
<td>0.765</td>
<td>0.482</td>
<td>–1.252</td>
<td>–0.697</td>
<td>–0.651</td>
<td>0.096</td>
</tr>
<tr>
<td>Northeast region</td>
<td>0.660</td>
<td>0.400</td>
<td>–1.069</td>
<td>–0.918</td>
<td>–0.211</td>
<td>0.060</td>
</tr>
<tr>
<td>South region</td>
<td>0.799</td>
<td>0.640</td>
<td>–0.805</td>
<td>–0.504</td>
<td>–0.331</td>
<td>0.030</td>
</tr>
<tr>
<td>Midwest region</td>
<td>0.688</td>
<td>0.458</td>
<td>–0.959</td>
<td>–0.684</td>
<td>–0.308</td>
<td>0.033</td>
</tr>
<tr>
<td>West region</td>
<td>0.639</td>
<td>0.486</td>
<td>–0.627</td>
<td>–0.378</td>
<td>–0.283</td>
<td>0.034</td>
</tr>
<tr>
<td>Country/town/suburb</td>
<td>0.742</td>
<td>0.548</td>
<td>–0.343</td>
<td>–0.598</td>
<td>–0.289</td>
<td>0.053</td>
</tr>
<tr>
<td>Medium/large city</td>
<td>0.680</td>
<td>0.494</td>
<td>–0.778</td>
<td>–0.520</td>
<td>–0.274</td>
<td>0.016</td>
</tr>
<tr>
<td>H.S. graduate or less</td>
<td>0.770</td>
<td>0.580</td>
<td>–0.986</td>
<td>–0.522</td>
<td>–0.401</td>
<td>0.037</td>
</tr>
<tr>
<td>Jr. college or more</td>
<td>0.640</td>
<td>0.488</td>
<td>–0.623</td>
<td>–0.522</td>
<td>–0.109</td>
<td>0.008</td>
</tr>
<tr>
<td>Evangelical Protestant</td>
<td>0.815</td>
<td>0.680</td>
<td>–0.236</td>
<td>–0.537</td>
<td>–0.205</td>
<td>0.013</td>
</tr>
<tr>
<td>Not evangelical</td>
<td>0.673</td>
<td>0.472</td>
<td>–0.834</td>
<td>–0.543</td>
<td>–0.315</td>
<td>0.030</td>
</tr>
<tr>
<td>Democrats</td>
<td>0.691</td>
<td>0.462</td>
<td>–0.957</td>
<td>–0.683</td>
<td>–0.288</td>
<td>0.014</td>
</tr>
<tr>
<td>Republicans</td>
<td>0.776</td>
<td>0.682</td>
<td>–0.480</td>
<td>–0.280</td>
<td>–0.210</td>
<td>0.010</td>
</tr>
</tbody>
</table>

<sup>a</sup>Total change is the difference in the 1988 and 2006 logits, where the logit is calculated as ln((p)(1 – p) <sup>−1</sup>).

<sup>b</sup>The residual effect is calculated by subtracting the intracohort change and cohort succession effects from the total change.
level changes, have pushed gay marriage attitudes toward a more liberal view since the 1980s (see also Loftus, 2001). Gay marriage attitudes have probably liberalized faster than could have been expected if gay rights activists had to wait for demographic change in the form of cohort succession.

All of the above suggests that acceptance of gay marriage is likely to continue to grow, and with that, laws are likely to change. Currently, 14 states and the District of Columbia grant at least some recognition of gay relationships; over half those states instituted their civil unions or domestic partnerships after Massachusetts (Human Rights Campaign, 2010). Indeed, at this writing, five states and DC have legalized gay marriage: Massachusetts, Connecticut, Iowa, Vermont, and New Hampshire. Not coincidentally, none of the states with legal gay marriage are located in the South, where attitudes toward gay marriage are least accepting. Given this pattern, it seems likely that gay marriage rights will expand throughout the non-southern regions. Southern states have farther to go before equal marriage rights will be granted; most have state constitutional amendments that would have to be repealed. At the very least, a “marriage protection” amendment to the U.S. Constitution is highly unlikely.

**APPENDIX**

Comparison of Decomposition Techniques for Trends in Negative Attitudes Toward Gay Marriage Rights, GSS

<table>
<thead>
<tr>
<th></th>
<th>Total Change</th>
<th>Intracohort Change Effect</th>
<th>Cohort Succession Effect</th>
<th>Residual Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Linear Decomposition</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regression Standardization</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forward standardization</td>
<td>– 0.819</td>
<td>– 0.552</td>
<td>– 0.287</td>
<td>0.020</td>
</tr>
<tr>
<td>Backward standardization</td>
<td>– 0.819</td>
<td>– 0.539</td>
<td>– 0.250</td>
<td>NA</td>
</tr>
<tr>
<td><strong>Algebraic Decomposition</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kitagawa’s method</td>
<td>– 0.137</td>
<td>– 0.114</td>
<td>– 0.021</td>
<td>NA</td>
</tr>
<tr>
<td>Forward partitioning</td>
<td>– 0.137</td>
<td>– 0.113</td>
<td>– 0.020</td>
<td>– 0.002</td>
</tr>
<tr>
<td>Backward partitioning</td>
<td>– 0.137</td>
<td>– 0.115</td>
<td>– 0.022</td>
<td>– 0.002</td>
</tr>
</tbody>
</table>

aTotal change is the difference in the 1988 and 2006 logits, where the logit is calculated as \( \ln[p(1-p)^{-1}] \) \((N=1,855)\).

bForward standardization uses 1988 data as the reference.

cBackward standardization uses 2006 data as the reference.

dTotal change is the difference in the 1988 and 2006 means using data for common cohorts only \((N=1,527)\).

NA indicates “not applicable;” those decomposition techniques do not yield residual effects.
REFERENCES


Decomposing Trends in Gay Marriage Attitudes


