COHORT INCREASES IN SEX WITH SAME-SEX PARTNERS

Do Trends Vary by Gender, Race, and Class?

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We examine change across U.S. cohorts born between 1920 and 2000 in their probability of having had sex with same-sex partners in the last year and since age 18. Using data from the 1988–2018 General Social Surveys, we explore how trends differ by gender, race, and class background. We find steep increases across birth cohorts in the proportion of women who have had sex with both men and women since age 18, whereas increases for men are less steep. We suggest that the trends reflect an increasingly accepting social climate, and that women's steeper trend is rooted in a long-term asymmetry in gender change, in which nonconformity to gender norms is more acceptable for women than men. We also find evidence that, among men, the increase in having had sex with both men and women was steeper for black than for white men, and for men of lower socioeconomic status; we speculate that the rise of mass incarceration among less privileged men may have influenced this trend.

Keywords: *bisexuality; cohort trends; lesbian; sexualities; and sexual minorities*

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INTRODUCTION

Bias against those who are (or appear to be) lesbian, gay, or bisexual is still common in the United States (Herek 2008; Mishel 2016; Pascoe 2007; Tilcsik 2011). Nonetheless, change is apparent: A gay rights movement is now decades old (Clendinen and Nagourney 2001), public opinion has moved steadily in a more tolerant direction since at least the 1990s (Ford and England 2016; Lewis 2015), and there are visible "gayborhoods" in many cities (Ghaziani 2014). In summer 2015, a landmark Supreme Court decision said that same-sex marriage must be legal throughout the land (*Obergefell v. Hodges* 2015).

Despite all this change, we have few analyses of change over time in how common it is for Americans to have sex with same-sex partners. In this article, using data from the General Social Survey (GSS), we analyze changes in same-sex sexual behavior across cohorts of individuals born between 1920 and 2000 (T. W. Smith et al. 2018). We show a strong increase across birth cohorts in the proportion of men and women who have had sex with both men and women since age 18. We find that increases were steeper for women than men, except for black men, whose increase has been much higher than white men's increase.

The change that we document is strong evidence that sexual behavior—in this case, the sex category of those with whom men and women have sex—is affected by social forces, although this does not preclude some biological influence as well. In many times and places, those who have sex with same-sex partners, or reveal gay, lesbian, or bisexual identities, have faced various forms of disapproval, intolerance, stigmatization, and sanctions. Despite the potential for evoking such negative reactions, many have pursued same-sex partnerships anyhow. Nonetheless, we make the general argument that knowledge of such potential disapproval makes some people less likely to act on attractions to same-sex partners, and may even make others less likely to develop or be aware of such attractions. These kinds of negative reactions are part of what Adrienne Rich (1980) had in mind when she famously talked about "compulsory heterosexuality." Given this suppressing effect, we argue that even though heterosexism remains alive and well, the lessening of negative reactions toward having sex with same-sex partners accounts for some of the upward trend across cohorts that we document.

A basic sociological observation is that social forces influence behavior—when something is impossible, punished, or stigmatized, people do it less, and when structural and cultural conditions are welcoming, people do it more. One set of arguments about the social construction of sexuality apply this to sexual behavior, saying that the severe discouragement of and sanctions for same-sex sexuality have limited such behavior. A related argument is that some social situations strongly limit sex with other-sex partners, and that this may encourage same-sex partnerships. For example, we might expect women to be more likely to have sex with other women when many men are away at war, and we might expect men or women to be more open to sex with same-sex partners when they are in single-sex prisons that make having other-sex partners virtually impossible. We will build on these arguments as we theorize potential explanations for the trends, as well as group differences in trends, that we document.

PAST RESEARCH ON CHANGE IN SEX WITH SAME-SEX PARTNERS[1]

Several studies have examined changes in same-sex sexual behaviors by period, meaning, by the date of the survey asking the question (J. Anderson and Stall 2002; Butler 2005; Copen, Chandra, and Febo-Vazquez 2016; Turner et al. 2005; Twenge, Sherman, and Wells 2016). Taken together, these studies find that the proportion of men and women who report having had same-sex sex has increased in more recent surveys, with larger increases for women than for men. Nonheterosexual identities are also increasing; Bridges and Moore (2018) showed an increase between 2008 and 2016 in the proportion of women identifying as bisexual, with more black than white women identifying as bisexual in 2016. A recent study by Twenge, Sherman, and Wells (2016) uses 1988–2014 GSS data and finds that the proportion having at least one same-sex sex partner since age 18 increased from 3.6% to 8.7% for women, and from 4.5% to 8.2% for men. Twenge, Sherman, and Wells (2016) argue that the upward change in having had sex with a same-sex partner is a period not a cohort effect; however, their conclusion can be questioned because the techniques they used, proposed by Yang and Land (2013), have been shown via simulation not to identify cohort trends in some cases where they exist in artificially generated data (Bell and Jones 2014). Because of the statistical problem in distinguishing age, period, and cohort effects, what studies identify as period change may arise from a combination of period and cohort effects, and the same is true for cohort change.

Few studies have focused on changes in same-sex sexual behavior across birth cohorts. While the main analysis by Butler (2005) and Turner et al. (2005) focused on period change, they also examined how reporting any same-sex partner since age 18 varied by cohort. They both find significant increases for women but not for men when examining cohorts born between 1929 and 1982 (Butler 2005) and between 1920 and 1984 (Turner et al. 2005). However, neither analysis controlled for age nor other compositional factors, and thus the cohort change noted could be a function of period change or compositional demographic change. The only multivariate analysis of cohort change in sex with same-sex partners is a study by England, Mishel, and Caudillo (2016). Using data from the National Survey of Family Growth (NSFG), they found cohort increases in women's reports of bisexual identity, of having had sex with both men and women, and of having had sex with women only. They found no cohort trend for men in sexual identity or sex with same-sex partners. They also found no difference in men's trends by race or class background, nor any class difference in trends among women. They did find evidence of a slightly steeper rise for black than for white women in ever having had sex with a same-sex partner. Their analysis is limited to cohorts born across the 19-year span from 1966 and 1995, whereas the present analysis uses respondents born across a much longer span of cohorts: the 80 years from 1920 through 2000.

THEORIZING CHANGE IN SEX WITH SAME-SEX PARTNERS

We argue that successive birth cohorts have come of age in social environments containing decreasing levels of disapproval, intolerance, stigmatization, or sanctions for sex with same-sex partners. These discouraging social forces probably dissuade some people from acting on attractions to same-sex partners, and may even make others less likely to develop or be aware of such attractions. When disapproval, stigma, intolerance, and sanctions toward those who have same-sex sex lessen, it follows that more people will engage in the behavior. We believe that while heterosexism is still pervasive, these discouraging factors have lessened, and we provide some evidence of this below.

National opinion polls show that the proportion of Americans who support marriage equality have risen (Gallup 2015; Pew Research Center 2019), and GSS analyses show that attitudes about same-sex sex have become more accepting since 1990 (R. Anderson and Fetner 2008; Butler 2005, 426; Ford and England 2016). Laws have also changed in a direction more favorable to LGBT rights; in June of 2013, the federal government struck down the Defense of Marriage Act (DOMA), ruling that the government cannot deny benefits to married same-sex couples by states, and the U.S. Supreme Court ruling *Obergefell v. Hodges* (2015) granted same-sex couples the right to marry in any state across America. Forty-one bills outlawing hate crimes against gay individuals, 70 bills protecting same-sex parents, 160 nondiscrimination bills, and 147 bills protecting gay youth were introduced in 2016 alone (Human Rights Campaign 2016). Thus, changes in social attitudes and laws to support LGBT rights may have made sex with same-sex partners more acceptable and led to increases in same-sex sexual behavior across successive birth cohorts.[2]

The gay rights movement also may have contributed to increased same-sex sexual behavior by birth cohort as it made the lives of gay people more visible and fought for the acceptance of gay rights. In 1969, the Stonewall Riots occurred, where patrons fought back after local police raided the Stonewall Inn, a gay bar in New York City. This led to three days of riots, and the event is often credited with starting the modern gay rights movement (Clendinen and Nagourney 2001). One success of the movement was seen when, in 1973, the American Psychiatric Association removed homosexuality from their list of mental illnesses (Eaklor 2008).

The sexual revolution coincided with the Stonewall Riots, as well as the rise of the feminist and civil rights movements, the Vietnam war, and a counterculture of "sex, drugs, and rock-and-roll" (Bailey 1997; Joyner and Laumann 2001; Robinson et al. 1991; D. S. Smith 1973; Wu, Martin, and England 2017). Although most of the change involved an increase in acceptance of heterosexual premarital sex, it also led some to challenge heteronormativity and may have inspired increased same-sex sexual behavior (D. S. Smith 1973).

Rosenfeld (2007) has argued that sexuality and decisions about partners have been altered by the contemporary "age of independence," the increase in the amount of time that young adults typically live away from their parents before they marry. A longer period between moving out of the parental home and moving into marriage enables young adults to make choices with less parental surveillance. Rosenfeld provides evidence that this was a factor in the rise of young adults living with same-sex and/or interracial partners since the 1960s.

Along the same lines, the Internet may have played an important role in increasing same-sex sexual behavior among Americans by making it easier to contact potential partners. After all, those seeking same-sex partners are a numerical minority, and today, the Internet has become the predominant way that same-sex couples in the United States meet (Rosenfeld and Thomas 2012). Additionally, the rise and proliferation of gay neighborhoods (or "gayborhoods") may have promoted increases in same-sex sexual behavior, because they make it easier for gay people to meet potential same-sex partners (Ghaziani 2014).

Although the examples discussed above entail declining barriers to and increased opportunities for same-sex sex, as mentioned above, it is also possible that, at least for some subgroups, same-sex partnerships have increased because of special circumstances making it extremely difficult to find other-sex partners for certain groups. We return to this below when we discuss intersections of gender and race.

THEORIZING WHY TRENDS MIGHT VARY BY GENDER

Several studies reviewed above found gender differences in trends in same-sex sexual behavior. Here we provide a theoretical account of why we might expect trends in same-sex sexual behavior to differ by gender.

One basic aspect of the gender system is that people face social pressure to conform to what is expected of them as men or women. Such norms suggest, for example, that men should be tough and women gentle. Conforming to gender norms also requires at least appearing to be heterosexual. Just as women violate gender norms by being executives or carpenters and men violate gender norms by being stay-at-home dads or nurses, both men and women violate gender norms by not appearing to be straight. Moreover, violating gender norms in the sexual realm is seen as negative and often has social costs (Pascoe 2007; Watts 2015). A second aspect of the gender system is that activities or attributes associated with women tend to be valued less than those that are associated with men. As one example of this, jobs filled largely by women pay less than what you could expect them to pay based on their demands (Levanon, England, and Allison 2009).

When we put these two aspects of the gender system together—that people face disapproval for violating gender norms, and that masculinity is more highly valued than femininity—it implies that violating gender expectations will lead to more status loss for men than women. When men violate gender norms, they are seen as more feminine; when women violate gender norms, they are seen as more masculine. Either may be met with social disapproval, but the stigma is greater for men's gender nonconformity precisely because it is seen as a movement toward a devalued status—femininity. This devaluation of femininity is presumably the reason that boys seen as effeminate are stigmatized much more than girls seen as boyish (Fine 1987; Pascoe 2007). When we add to this that one needs to appear straight to conform to gender norms, it implies that departures from exclusive heterosexuality are more stigmatizing for men than women, as experimental work by Watts (2015) has shown. Ethnographic research supports the conclusion as well; ridiculing someone by calling him a “fag” is common among male youth, but it is much less common to ridicule girls by calling them “dykes” (Pascoe 2007). Indeed, recent analyses of Google searches shows that “Is my son gay?” or “Is my husband gay?” are much more common searches than “Is my daughter gay?” or “Is my wife gay?” suggesting more concern over men and boys being gay compared to women and girls (Mishel, Bridges, and Caudillo 2018; Mishel and Caudillo 2017). The greatest stigma seems reserved for men who appear effeminate and identify as gay or engage in sex with same-sex partners, especially those being the receptive partner in anal sex.[3]

Thus, we suggest the following explanation of why there has been more increase in women’s than men’s departure from exclusive heterosexuality: Changes associated with the gender revolution sent the message that gender nonconformity was more acceptable than before, and, given that deviations from exclusive heterosexuality are seen as gender nonconforming, part of the implicit message was permission to have same-sex sexual relationships. But this message was received much more strongly by women than men, because the continued devaluation of “femininity” meant that the gender revolution was primarily a one-way street, largely seen as inapplicable to men. Because of this asymmetry, we expect to find more increase in women’s than in men’s departure from exclusive heterosexuality in our analyses.

THEORIZING INTERSECTIONS OF GENDER WITH RACE OR CLASS

Attitudinal research shows that African Americans are more critical than whites of sex with same-sex partners, and those with lower education are much more critical. Yet attitudes have moved strongly in a more tolerant direction for blacks and whites, and for all education groups (Ford and England 2016; Loftus 2001). Based on this, and to the extent that behavior follows attitudes, we might expect no differences in *trends* in sex with same-sex partners by race or education, within either men or women.

However, external factors may be as important as internalized homophobia in explaining sexual behavior. So far, we have focused on the lessening of social forces discouraging or punishing same-sex sexual expression. Although a reduction of such intolerance clearly increased same-sex expression, we suggest that some of this increase might also result from a reduction of the opportunity for sex with other-sex partners. In particular, we argue that the rise of mass incarceration made it virtually impossible for many men to have sex with women for long periods of time while incarcerated, and this may have led some who would not otherwise have considered doing so to have same-sex partners. The idea that, when faced with lack of opportunities to have sex with one sex, people would turn to another sex might at first glance sound unlikely. But it is implicit in much writing on “the closet”: In decades long past, some who were attracted mainly or exclusively to same-sex partners nevertheless married other-sex partners and had sex exclusively or mostly with them. Thus, we suggest that, just as lack of opportunity for same-sex partners may lead to having other-sex partners, lack of opportunity for other-sex partners may make having same-sex partners more likely.

Incarceration increased dramatically from the early 1970s forward, and peaked just after 2000, declining only slightly since then (The Sentencing Project 2017; Travis, Western, and Redburn 2014). These trends have meant increasing probabilities of incarceration for successive birth cohorts of young American men (Pettit and Western 2004). Prisons are segregated institutions in which inmates are all of the same sex, and from which they cannot leave at will to find sexual or romantic partners, making heterosexual sex largely inaccessible.[4] Rules typically prohibit sex between the same-sex inmates, whether consensual or coerced (Saum et al. 1995; Tewksbury and Connor 2014). Yet these rules are often unenforced, as inmates live in close, overcrowded quarters with regular periods of reduced supervision (Mahon 1996). Also, some correctional staff are deliberately lax in enforcing sexual behavior bans (Robertson 2003; Seal et al. 2008).

Not surprisingly, then, research on sex between male inmates confirms that it is quite common. There is sexual assault in prisons (Beck et al. 2013; Struckman-Johnson and Struckman-Johnson 2006), but evidence suggests that most partnered sexual activity in prison is consensual (Saum et al. 1995). As for how common such sex is, one study took a random sample of inmates in a California prison and found that while 78% of the sample identified as heterosexual, 65% claimed to have engaged in consensual sex with another man while in prison (Wooden and Parker 1982). Another study, from a prison in Delaware, found an extremely low percentage of prisoners, 2%, reporting sex with fellow inmates, yet nearly 70% of these respondents reported that consensual sex between men occurred daily in the prison (Saum et al. 1995). Further studies find a range of estimates that vary from 12% to 25% who report consensual sex with fellow inmates (Hensley 2001; Nacci and Kane 1983; Tewksbury 1989).

Given that sex between inmates, while prohibited, is not rare, we might expect the large increase in incarceration rates to have led to increased same-sex sex. Because more than 90% of state and federal prisoners are men (The Sentencing Project 2017), we would expect the increase in incarceration to have a larger effect on men's than women's trend in same-sex behavior. Among men, we would expect effects to be stronger for blacks, and for those lower on social class hierarchies, since they are incarcerated at levels dramatically above their share of the population (Pettit and Western 2004), and their incarceration trended upward more strongly (National Research Council 2014).

DATA AND METHODS

Our goal is to examine cohort trends in same-sex sexual behavior, and to assess whether they differ by race, class background, gender, or intersections of these characteristics. To do so, we use pooled cross-sectional data from the GSS, collected in 1989, 1990, 1991, 1993, 1994, and then every two years until 2018.[5] GSS respondents can be of any age above 17 years; we used only respondents between 18 and 69 years. For descriptive statistics on our sample, see Table 1.

Our first three outcome variables concern sexual partners since age 18. We constructed three outcome variables from the following two questions: "Now thinking about the time since your 18th birthday (including the past 12 months) how many *female* partners have you had sex with?" and "Now thinking about the time since your 18th birthday (including the past 12 months) how many *male* partners have you had sex with?" Using these questions, we classified respondents as follows: (1) has had at least one partner of each sex since age 18, (2) has had at least one other-sex *and* at least two same-sex partners since age 18, and (3) has had sex with *only* same-sex partners since age 18. Our reasoning for including an outcome variable for whether the respondent has had two same-sex sex partners since age 18 (instead of one) is to analyze trends when imposing a more stringent criterion that requires more than an isolated experiment with one person.

A second analysis focuses on who respondents had sex *within the last year*. We form two dependent variables using the question "Have your sex partners in the last 12 months been . . . ?" where the available answers are "exclusively male," "both male and female," and "exclusively female." We classified respondents as follows: (1) has had at least one partner of each sex in the last year and (2) had sex with *only* same-sex partners in the last year.

Thus, separately for men and women, we estimate logistic regression models predicting the following 5 outcomes: (1) whether, since age 18, the respondent has had at least one partner of each sex; (2) whether, since age 18, the respondent has had at least one other-sex and two same-sex

TABLE 1: Means on All Variables, by Gender

	Women	*Men*
Sex since age 18		
With both sexes	0.07	0.05
With same-sex only	0.01	0.02
Sex in last year		
With both sexes	0.01	0.01
With same-sex only	0.02	0.03
Birth cohort		
1920–1945	0.17	0.16
1946–1955	0.20	0.21
1956–1965	0.25	0.25
1966–1975	0.20	0.20
1976–1983	0.11	0.10
1984–2000	0.07	0.08
Race		
White	0.75	0.79
Black	0.17	0.13
Other race	0.08	0.09
Mother's education		
<High school (HS)	0.32	0.28
HS/some college	0.54	0.58
BA+	0.13	0.15
Region		
Northeast	0.19	0.17
Midwest	0.24	0.24
South	0.37	0.36
West	0.21	0.22
Immigrant	0.11	0.11
Age of respondent	42.31	42.26
N	20,500	16,824

sexual partners; (3) whether, since age 18, the respondent has had only same-sex sexual partners; (4) whether, in the last year, the respondent has had at least one partner of each sex; and (5) whether, in the last year, the respondent has had only same-sex sexual partners.[6]

The main models for the five outcomes are described by Equation 1, where capital letters indicate that the construct is represented by a series of indicator variables, and p represents the probability of observing each of the outcomes of interest for person i.

$$logit(p_i) = \beta_0 + \beta_1(COHORT_i) + \beta_2(AGE_i) + \beta_3(MOMED_i) + \beta_4(RACE_i) + \beta_5(Immigrant_i) + \beta_6(REGION_i) + \varepsilon_i \quad (1)$$

COHORT is a set of five binary indicators identifying cohorts 1946–1955, 1956–1965, 1966–1975, 1976–1983, and 1984–2000 (the reference is 1920–1945). The first and last cohorts were made to cover more years because, without this, their *N*s would be unreliably small. Even with this, the last cohort is less than half the size of most. *AGE* is a set of binary indicators identifying each two years of age for ages 18 to 69 (i.e., 18–19, 20–21, and so on, where the reference is 18–19). We want age indicators to be numerous so that even detailed patterns of nonlinearity are controlled, given the necessary but not complete correlation between age and cohort in pooled-survey-year data, but we did not enter indicators for every year of age because it resulted in some models not estimating because of empty cells. We excluded the survey year (period) from our models to avoid the familiar age-period-cohort identification problem;[7] thus, the cohort *trends* that we estimate may contain a combination of cohort and period e*ffects*. *MOMED*, our main measure of class background, is a set of two binary indicators that indicate whether a respondent's mother has completed a bachelor's degree or higher, or a high school degree/some college (the reference is less than a high school degree). *RACE* represents two dummy variables indicating whether the respondent is black or of a race other than black or white (reference is white). In the GSS, Hispanic origin was recorded for the first time in 2000, so we did not use this variable to form our race indicators in order to be able to use data since 1988, but below we discuss a sensitivity test in which we used an indirect way of measuring whether individuals are Hispanic for earlier years. *Immigrant* is a dummy variable that equals 1 if the respondent was born outside of the United States, and 0 otherwise. *REGION* represents a set of binary indicators for regions Midwest, South, and West (reference is Northeast). All of our analyses incorporate the survey weights recommended by GSS staff.[8]

For each of our five outcome variables, we use logistic regression results to compute predicted probabilities for each cohort using an average marginal effects approach, which controls for compositional change in all variables other than cohort by setting them at their full (all cohort) sample distributions for each cohort's estimated probability.

To assess whether cohort trends differ by race or class, we re-estimate the gender-specific regressions described above, adding interactions between cohort indicators and race, and between cohort indicators and mother's education, and compute predicted probabilities from these models for each cohort at each education or race level. We use an approach to significance tests for group differences in trends proposed by Mize (2019) as appropriate for nonlinear models such as logistic regression. To do so, we computed the average marginal effects of cohort separately by race (i.e., the difference in the probability of having engaged in the behavior between those in the first cohort and every other cohort). Then we tested whether these marginal effects differed significantly by race. To look at differences in trends by class background, we do the analogous tests for mother's education.

For each of our five outcome variables, the reference category includes all other categories, even those who have not had sex. We include these individuals in the reference category rather than excluding such individuals from the models for two reasons. First, members of earlier cohorts who were attracted to same-sex partners but did not follow through because of stigma may have chosen celibacy over heteronormativity; excluding them from the analysis would not allow us to see the extent to which social conditions in early cohorts discouraged sexual behavior with same-sex partner. Second, in the analyses of partnerships in the last year, it is even more important to keep those who did not have sex in the previous year in the sample, because it is common for individuals to have a year in which they had no sexual partner—for example, while a young virgin, after a breakup, or after being widowed. However, if we re-estimate all models excluding those who have not had sex, trends are similar (results not shown).

We estimate multiple logistic regressions rather than a single multinomial logistic regression (MNL) that could produce, from a single model, predicted probabilities that respondents were in each of our outcome categories. We chose logistic regression because of smaller cell sizes in the MNL approach. Fortunately, using MNL yields similar conclusions about trends (results not shown).

We performed additional analyses to provide assurance that our basic conclusions hold with alternative measures of class and race. While our main analyses use mother's education as a measure of class background, for sensitivity tests, we used two alternative measures of class: (1) respondent's education (coded with the same categories used for mother's education) and (2) respondent's father's occupational status (Hout, Smith, and Marsden, n.d.), entered linearly as a continuous variable. Regarding race, as mentioned above, the GSS did not ask about Hispanic status until 2000, so to include data for years before that, the race/ethnic measure in our main analyses classified individuals as black, white, and other. However, in the years before 2000, respondents were asked what part of the world their ancestors are from, so in an alternative analysis we used this information for pre-2000 years (counting those who said their ancestors are from Latin America as Hispanic), and used reported Hispanic status after 2000, to create a new race/ethnicity variable classifying individuals as Hispanic, (non-Hispanic) white, (non-Hispanic) black, and (non-Hispanic) other.

Findings from these sensitivity tests are not shown but are discussed below and are available from the first author. We are looking for the robustness of two types of conclusions, about trends for all men or all women, and about class or race differences in trends. As for the first, race and class are additive control variables in regressions; here the question is whether using alternative measures for class or race changes the cohort coefficients, which reveal the trend in behavior after adjustments for change across successive cohorts in their racial or class composition. We find no nontrivial changes when using the alternative measures as additive controls in models predicting any of our outcome variables.

Second, we estimate models that interact the alternative race or class variables with cohort to see if our assessment of whether cohort *trends* differ by race or class is different when using alternative measures of race or class. These interaction analyses with alternative measures of race and class are performed only for the one outcome variable showing a large upward trend—whether one had had sex with at least one man and at least one woman since age 18. We limited the tests to this outcome because it is the only one with a large enough number of people engaging in the behavior that there is adequate statistical power to test group differences in trends. We report findings from these sensitivity tests alongside our main findings below.

FINDINGS: TRENDS FOR WOMEN AND MEN

In Tables 2 and 3, we show coefficients for regression results for women and men. Results show significant cohort increases in many of our outcomes.

Patterns for men and women can be most clearly seen by examining Table 4, which shows the predicted probabilities for each cohort based on the regressions in Tables 2 and 3. The predicted probability that a woman reported sex with at least one man and at least one woman since age 18

TABLE 2: Coefficients from Logistic Regressions for Women

	Coefficients Predicting Whether Women Had . . .				
	(1) Male and Female Sexual Partners since Age 18	*(2) At Least One Male and At Least Two Female Sexual Partners since Age 18*	*(3) Only Female Sexual Partners since Age 18*	*(4) Male and Female Sexual Partners in the Last Year*	*(5) Only Female Sexual Partners in the Last Year*
Birth cohort					
1920–1945					
1946–1955	1.06***	0.70**	0.62	0.61	1.28***
1956–1965	1.35***	0.99***	0.21	1.19	0.98*
1966–1975	1.84***	1.27***	0.72	1.49^	1.60***
1976–1983	2.44***	1.80***	0.08	2.26**	1.65***
1984–2000	3.01***	2.36***	1.06^	2.76***	2.23***
Mother's education					
<High school (HS)					
HS/some college	–0.03	0.14	1.20***	0.30	0.42*
BA+	0.07	0.12	0.76^	0.68^	0.20
Race					
White					
Black	0.13	0.20	–0.35	0.70**	–0.07
Other race	–0.30^	–0.69**	0.26	–0.35	–0.18
Immigrant	0.15	0.15	–0.02	–0.13	–0.19
Region					
Northeast					
Midwest	–0.00	–0.25	–0.40	–0.47	–0.41*
South	0.06	–0.07	–0.16	–0.30	–0.16
West	0.48***	0.28^	–0.09	0.50	–0.07
Intercept	–5.97***	–6.80***	–6.68***	–7.62***	–6.50***
N	13,395	13,395	13,395	13,171	15,147

***$p < 0.001$; **$p < 0.01$; *$p < 0.05$; ^$p < 0.10$.
NOTE: Two-year indicator variables for ages 18–69 were also included in all models, but coefficients are not shown.

was only 0.01 in the first cohort, born 1920–1945, and moved steadily up to 0.21 in the last cohort, born 1984–2000—a huge increase. Men's analogous increase was from 0.02 to 0.12, also large, but not as steep as for women. The gender difference in the amount of intercohort change is statistically significant, as the third column in Table 4 shows, using the method proposed by Mize (2019). This gender difference in trends, with a steeper increase for women in successive cohorts, is shown visually in Figure 1.

TABLE 3: Coefficients from Logistic Regressions for Men

	Coefficients Predicting Whether Men Had . . .				
	(1) Male and Female Sexual Partners Since Age 18	*(2) At Least One Female and At Least Two Male Sexual Partners since Age 18*	*(3) Only Male Sexual Partners since Age 18*	*(4) Male and Female Sexual Partners in the Last Year*	*(5) Only Male Sexual Partners in the Last Year*
Birth cohort					
1920–1945					
1946–1955	0.79***	0.69***	–0.15	1.29*	0.11
1956–1965	1.20***	1.28***	0.42	1.76**	0.68**
1966–1975	1.70***	1.74***	0.29	1.76*	0.52^
1976–1983	1.89***	1.86***	–0.03	1.50^	0.42
1984–2000	2.17***	2.19***	0.50	1.74*	0.71^
Mother's education					
<High school (HS)					
HS/some college	–0.17	–0.16	–0.10	–0.33	–0.13
BA+	–0.38*	–0.35^	0.17	0.21	–0.14
Race					
White					
Black	0.44**	0.57***	0.44*	0.39	0.23
Other race	0.27	0.13	–0.17	0.17	–0.03
Immigrant	0.06	–0.16	–0.19	0.51	–0.26
Region					
Northeast					
Midwest	0.20	0.14	–0.19	0.34	–0.15
South	0.04	0.03	–0.23	–0.13	–0.07
West	0.06	0.15	–0.20	–0.15	–0.01
Intercept	–5.47***	–6.16***	–3.70***	–7.25***	–3.94***
N	10,762	10,762	10,762	10,916	12,253

***$p < 0.001$; **$p < 0.01$; *$p < 0.05$; ^$p < 0.10$.
NOTE: Two-year indicator variables for ages 18–69 were also included in all models, but coefficients are not shown.

When requiring at least two same-sex partners (along with at least one male partner), women's predicted values do not increase as steeply—they go from 0.01 to 0.10 (compared with the increase to 0.21 when requiring only one same-sex partner). This increase is not so different from men's increase from 0.02 to 0.12 for having sex with at least one same-sex and at least one other-sex partner (Table 4). This implies that all of the difference between women's and men's trend in having at least one partner of each sex comes from women who have had only one female sex partner.

TABLE 4: Predicted Probabilities for Reports of Women's and Men's Sexual Partners Since Age 18 and in the Last Year

Cohort	*Women*	*Men*	*Gender Difference in Contrast with Cohort 1920–1945*
SS+OS since age 18			
1920–1945	0.013	0.016	
1946–1955	0.037***	0.035***	0.005
1956–1965	0.049***	0.052***	0.001
1966–1975	0.077***	0.081***	–0.001
1976–1983	0.130***	0.095***	0.038^
1984–2000	0.207***	0.121***	0.088**
2SS+1OS since age 18			
1920–1945	0.010	0.012	
1946–1955	0.020**	0.023**	–0.001
1956–1965	0.027***	0.040***	–0.012^
1966–1975	0.035***	0.062***	–0.025*
1976–1983	0.058***	0.069***	–0.009
1984–2000	0.097***	0.093***	0.006
SS only since age 18			
1920–1945	0.006	0.014	
1946–1955	0.012^	0.012	0.007
1956–1965	0.008	0.022	–0.006
1966–1975	0.013	0.019	0.002
1976–1983	0.007	0.014	0.001
1984–2000	0.018^	0.024	0.003
SS+OS previous year			
1920–1945	0.001	0.001	
1946–1955	0.002	0.005*	–0.003
1956–1965	0.004^	0.008**	–0.004
1966–1975	0.006*	0.008*	–0.002
1976–1983	0.013***	0.006^	0.006
1984–2000	0.020***	0.008	0.013^
SS only previous year			
1920–1945	0.005	0.016	
1946–1955	0.019***	0.018	0.011*
1956–1965	0.014**	0.031**	–0.006
1966–1975	0.025***	0.027^	0.009
1976–1983	0.027***	0.024	0.013
1984–2000	0.047***	0.032^	0.025^

***$p < 0.001$; **$p < 0.01$; *$p < 0.05$; ^$p < 0.10$.

NOTE: Probabilities are computed from regression models in Tables 2 and 3, using average marginal effects. SS+OS = had at least one same-sex partner and at least one other-sex partner; 2SS+1OS = had at least two same-sex partners and at least one other-sex partner; SS only = had only same-sex partners. Asterisks for columns 1 and 2 denote significance of intercohort change in probability between the first and the indicated cohort. Asterisks for Column 3 indicate the significance of the gender difference in intercohort change from the first to the indicated cohort.

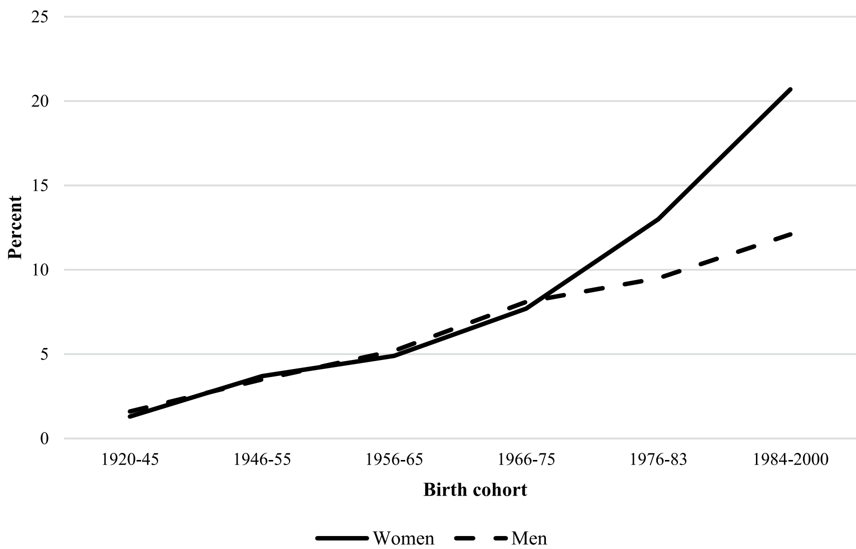

FIGURE 1: Percentage of Women and Men in Each Cohort Who Have Had Both Male and Female Sexual Partners

NOTE: Percentages are predicted probabilities (× 100) from regression models that adjust for cohort differences in composition by age, race, and other control variables. "Both" implies at least one male and at least one female sexual partner. Numbers are from Table 4.

Indeed, using this more stringent criterion of two same-sex partners, predicted values for both men and women start at 0.01 in the first cohort, and increase to 0.09 for men and 0.10 for women in the last cohort, a trivial difference (Table 4). These trends for women are shown in Figure 2.

There is no trend in having sex with only same-sex partners since age 18 for either men or women; the predicted probabilities are approximately 0.01 or 0.02 in every cohort for both men and women (Table 4). In interpreting this result, we note past research showing that many individuals who ultimately come to identify as lesbians or gay men had sex at some point with a member of the other sex (Brown and England 2016); the heteronormative environment in which most youth come of age makes it likely that even those attracted largely to those of their same sex will face social pressure to have a partner of the other sex. Thus, the lack of trend in having had only same-sex partners tells us little about trends in the proportion who ultimately live a life in which all or many of their relationships are with same-sex partners.[9]

The last two sections of Table 4 show predicted probabilities for same-sex sexual behavior in the last year. Although the increase for women in

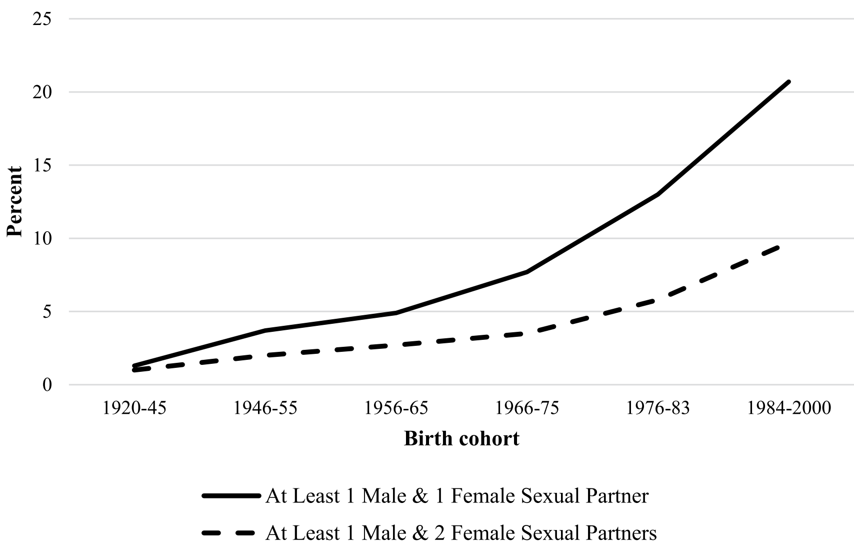

FIGURE 2: Percent of Women in Each Cohort who Have Had (1) At Least One Male and At Least One Female Sexual Partner, and (2) At Least One Male and At Least Two Female Sexual Partners

NOTE: Percentages are predicted probabilities (x 100) from regression models that adjust for cohort differences in composition by age, race, and other control variables. Numbers are from Table 4.

the probability of having partners of both sexes is statistically significant, the predicted values are very low, starting at 0.00 and ascending only to 0.02. Men also saw little change; the predicted probability was 0.00 for those born 1920–1945, and then moved to 0.01 for those born 1946–1955 as well as all subsequent cohorts. The relatively low proportions from any cohort of men and women who have sex in a given year with both sexes may reflect the fact that some of the people who report partners of both sexes since age 18 have solidified a pattern of exclusively same-sex partners by the time of the survey, and thus will have had only same-sex partners recently. It may also indicate that, by their 30s, many people have formed monogamous relationships; this will usually entail only a single partner in any given year, thus precluding partners of both sexes, *even* for those with a long-term bisexual identity.

Although we saw above that having ever had both sexes as partners is much more common than having ever had only same-sex partners, the opposite is true for sexual behavior in the last year; having had sex only with same-sex partners in the last year is more common, for both men and women, than having sex with both sexes in the last year. Table 4 shows that, for women, predicted probabilities for having only same-sex partners in the last year increases significantly across birth cohorts, moving from 0.01 to 0.05, whereas men's probabilities moved up and down between 0.02 and 0.03 with no clear trend.

FINDINGS: DO TRENDS DIFFER BY CLASS OR RACE BACKGROUND?

In results not shown, separately for men and women, we interacted all variables in our first regression model—measuring whether one has had at least one partner of each sex since age 18—with mother's education in one set of models, and with race in another. From these models, we computed predicted probabilities for each cohort, at each education or race level, to compare the amount of intercohort change experienced by different race or mother's education groups within each gender, after controlling for change in compositional variables (such as age). We limit these analyses to our first outcome for two reasons: This is the only outcome with a substantively large increase, and the other outcomes are sufficiently rare enough that the models with interactions typically do not produce estimates.

Results reveal that for women, the first-to-last intercohort change is not significantly different for blacks, whites, or other races, or for those of different class backgrounds, as measured by their mothers' education. (These results are not shown, but they use tests such as those in Table 4, applied to race and class differences among women.) We conclude that, for women, trends are similar for whites, blacks, and those of other races, and for women with more and less educated mothers. Our sensitivity test with an alternative measure of race shows no different trend for Hispanics than for blacks or whites among women. Similarly, our sensitivity tests using the two alternative measures of class—the respondent's education and her father's occupational status—both confirm the finding that women's upward trend in having had sex with both men and women does not differ by class.

For men, as for women, we find that trends do not differ by mother's education. But for men, trends do differ significantly when using either of our alternative measures of class. Predicted probabilities from the models interacting class and cohort (and controlling for race, immigrant status, and region) show that men who completed less than high school showed a trend of 0.01 to 0.23 from the first to last cohort in the probability of ever having sex with both men and women, whereas those with a high school degree or some college trended from 0.02 to 0.11, and college graduates trended from 0.03 to 0.08. When using men's fathers' occupational status as the measure of class, men whose fathers were at the 25th percentile of occupational status trended from 0.01 to 0.22 in the probability of ever having had both sexes as partners, compared with a trend of 0.01 to 0.18 for those whose fathers were at the 75th percentile. Thus, overall, more disadvantaged men showed more increase in having had sex with both men and women.

Regarding race differences among men, we find that there is a much steeper cohort increase for black men than white men in the probability of having sex with both sexes. (The trend for men of "other race" is no different from trends for white men.) In Table A1 of the Online Appendix, we show the predicted probabilities by cohort of having had sex with at least one member of each sex since age 18, separately for black and white men, calculated from logistic regressions (regression models not shown). Black men in the first cohort, born 1920–1945 had a predicted probability of only 0.01 of having sex with at least one man and at least one woman, which rose to 0.20 for those born in 1984–2000. This increase is much larger than the rise from 0.02 to 0.11 estimated for white men. See Figure 3 for a visual plot of these predicted probabilities.

Indeed, the estimated trend for black men, from 0.01 to 0.20, is similar to the trend estimated for all women, which is from 0.01 to 0.21. Given that the trend did not differ significantly by race among women, white men are the outliers, with an estimated trend moving only from 0.02 to 0.11. The right-most column of Appendix Table A1 also allows us to assess whether the black–white differences in men's trends are statistically significant. When black and white men's trends from the first cohort, born 1920–1945, are compared with the fourth cohort, born 1966–1975, the increase in probability is 0.09 higher for black than white men, and that difference is statistically significant ($p < 0.05$). By the next cohort, the difference in trend between black and white men was slightly larger, 0.10, but only marginally significant ($p < 0.10$). By the final cohort, the difference in black and white men's increase in probability was still 0.10, but this difference in trend was not statistically significant, probably because of the smaller sample size of either race in this cohort. Given the lack of significance for some of the contrasts, our conclusions regarding race differences in men's trends should be seen as only tentative, but the estimated differences are significant for some cohort contrasts

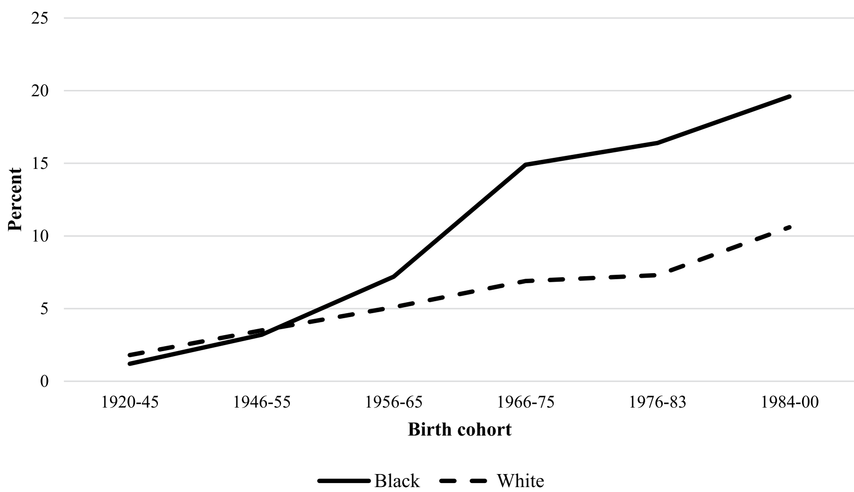

FIGURE 3: Percent of White and Black Men in Each Cohort Who Have Had Both Male and Female Sexual Partners
NOTE: Percentages are predicted probabilities (× 100) from regression models that adjust for cohort differences in composition by age and other control variables. "Both" implies at least one male and at least one female sexual partner. Numbers are from Appendix Table A1.

and they are very large in magnitude, with the proportion of white men who have had sex with both sexes moving from 0.02 to 0.11 between the earliest and latest cohorts, whereas black men moved from 0.01 to 0.20 across cohorts. We also see a steeper increase for black than white men when we use a more stringent criterion of having ever had sex with two same-sex partners (as well as at least one woman), which moved from 0.01 to 0.14 across cohorts of black men, and from 0.01 to 0.09 across cohorts of white men (results not shown). When we use our alternative measure of race (described above) as a sensitivity test, we find the same black–white differences described above. But the analysis provides the additional information that trends for Hispanic men are intermediate between those for blacks and whites, with the Hispanic–white differences statistically significant.[10]

Overall, our results for men, but not women, show class and race differences in trends, such that men of color, men with lower-status fathers, and men who completed less education showed greater intercohort increases in having both men and women as sexual partners since age 18. We suggest that the dramatic rise in incarceration might be one factor in these group differences in trends. Being black or Hispanic and having lower education are well-known predictors of incarceration, with the highest rates for black men with little education. If, as we hypothesize, incarceration increases a man's probability of having a same-sex partner, for the majority of men who saw themselves as heterosexual before incarceration, then we would expect this increase to show up in trends in having ever had sex with *both* sexes, and this is what we find. Moreover, the cohorts whose contrast with the first cohort are much greater for blacks than whites are those born after 1966; these cohorts turned 20 years old in the 1980s or later, when incarceration was at rising and at very high levels. Hispanics have incarceration rates between those of blacks and whites (Carson 2015); thus, their intermediate steepness of trend is also consistent with a role for incarceration. Similarly, our findings of steeper intercohort increases in sex with both men and women among men with lower education, or among those whose fathers had lower occupational status, are consistent with the role of incarceration. Of course, other factors may have contributed as well. For example, because HIV/AIDS disproportionately affected the black community, queer activists of color worked hard both to acquire funds for HIV prevention efforts in black communities and to challenge homophobic attitudes among African Americans, and their efforts may also have destigmatized sex between men of color (Royles 2014).

Although there is no repeated measure regarding incarceration experience in the GSS, there was a question asked in 2012 only. Respondents were asked whether they had "ever spent any time in jail or prison." Eleven percent of men surveyed that year who *had* spent time in prison or jail also reported having sex with both sexes since age 18, whereas only 6% of men who had *never* spent time in prison or jail reported sex with both sexes; a chi-square tests shows these differences to be significant at $p < 0.05$ (results not shown). Among white men, the contrast is 12% who had spent time in prison or jail also report sex with both sexes since 18, versus 7% of white men who had *not* spent time in prison or jail, although this does not make the $p < 0.05$ level of significance. Among black men, it is 13% who had spent time in prison or jail report sex with both sexes since age 18, versus 0% who had *not* spent time in prison or jail.[11]

We cannot sensibly include the measure of whether men have ever been in prison in our main regressions, because the *N* is drastically reduced when limiting our sample to only the 2012 GSS wave, and cohort is more collinear with age when there is only one survey year (it would be completely collinear if both were entered linearly). However, to assess whether the bivariate relationship between incarceration experience and same-sex sexual experience discussed above persists under controls, we estimated coefficients from a logistic regression model for men in the 2012 GSS wave, predicting whether they have had sex with at least one man and at least one woman since age 18 from the measure of prior incarceration, while controlling for race, mother's education, immigrant status, region, and age. This analysis shows a significant positive relationship between past incarceration and having had sex with both men and women (see Online Appendix Table A2).

Further evidence that incarceration is linked to same-sex sexual experience is found from a supplementary analysis using a different data set—the 2011–2015 National Survey of Family Growth (NSFG), which provides a much larger sample (NCHS 2016). Using the NSFG, we find the same general pattern: In a logistic regression predicting sex with both sexes among men, men who spent time in prison, jail, or juvenile detention were significantly more likely ($p < 0.001$) to report sex with both sexes compared to those who had not spent time incarcerated. (See model 1 in Online Appendix Table A3.) Model 2 in Table A3 shows that this pattern still holds after controlling for race, immigrant status, and mother's education ($p < 0.01$).

CONCLUSION

We have shown steady, monotonic, and significant increases across birth cohorts in the proportion of women who (1) have had sex with at least one male and at least one female partner since age 18, (2) have had sex with at least two women and at least one man since age 18, (3) have had sex with at least one member of each sex in the last year, and (4) have had sex with only women in the last year. Men also showed a significant increase in having had sex with both sexes since age 18, whether we require one or two same-sex partners, but they showed inconsistent patterns on the other measures. These changes make clear that sexual behavior is strongly influenced by social forces (Diamond and Rosky 2016). Yet while the factors influencing sexual behavior that we focus on are social, our arguments are potentially consistent with a range of assumptions about the relative importance of the social and biological, as long as a sizeable amount of social determination is accepted.

One limitation of our analysis is that, while we have interpreted increases in *reports* of sex with same-sex partners as indicative of real behavior changes, we cannot be certain that the observed change is not an increase in the willingness to disclose sex with partners of the same sex rather than a change in actual behavior. We believe, however, that the increases are large enough that they are unlikely to be entirely a function of declines in underreporting. Another limitation is that, while our analysis shows cohort *change*, we cannot be sure what mix of cohort and period *effects* this change represents; it is probably a combination of both. A final limitation is that, despite our demonstration of cohort change, we could not test the potential explanations for the change in sexual behavior we have offered, such as liberalizing attitudes, increased opportunities, or rises in incarceration. In some cases, this was because the GSS data did not have measures of these factors, and although other data sources provide some information on these hypothesized explanatory factors, they do not allow us to tag them to birth cohorts. Nonetheless, some parts of our analysis did provide hints about causes of cohort change.

Recognizing that these are speculations, we suggest that some of the change we document arose from changing attitudes and laws, which gave increased legitimacy to and approval of same-sex relationships. We believe that the gay rights movement and the sexual revolution both inspired cohort changes in increased same-sex sexuality. We also suggest that some of the increase in same-sex sex that we have documented may have arisen because the emergence of "gayborhoods" made finding same-sex partners easier, and because changes in the life course of young adults decreased parental influence over mate selection. And finally, we suggest that when opportunities for other-sex sex decrease, sex with same-sex partners may increase. One example of this is the rise of mass incarceration, which exposed more men, especially black men, to constraints on their heterosexual expression.

We showed that among women, the predicted probability of having ever had sex with at least one person of each sex moved from 0.01 in the cohort born 1920–1945 to 0.21 among those born in 1984–2000, whereas the analogous increase for men was 0.02 to 0.12—a steeper trend for women than for men. However, when we used a more stringent criterion—having had at least two same-sex partners as well as one or more partners of the other sex—women's trend is less steep and matches men's. The two analyses combined reveal that the difference between the trend for men and women is explained by the larger incidence of women who have had only one same-sex partner.

We speculate that the reason for the gender difference in the trend concerns the asymmetry of the gender revolution. Engaging in same-sex sex is still typically seen as gender nonconformity, and given the continued devaluation of anything associated with women, men's gender nonconformity entails more stigma than women's. Put simply, contemporary women interested in sexual relationships with same-sex partners feel freer than men to explore them, or to choose them as a permanent lifestyle, and significant numbers do so. Yet the fact that the difference between women's and men's trends consists entirely of women who had only one same-sex partner suggests that the forces promoting heteronormativity are still strong.

To make gender analyses intersectional requires that we ask whether gender differences are themselves different by race or class, or whether race and class differences vary by gender. In exploring these questions, we found that white, black, and Hispanic women whose mothers had all levels of education showed similar upward trends. But among men, we found significant differences in trends by race, and by two of our measures of class. The predicted probability that a black man reported having had at least one partner of each sex since age 18 rose from 0.01 to 0.20 across cohorts, much more than the rise from 0.02 to 0.11 for white men, with an intermediate trend for Hispanic men. Some but not all of the racial differences in change from the first to later cohorts were statistically significant, suggesting that our conclusions on this should be provisional, and that continued research is needed on gender-specific race differences in trends. With that caveat in mind, we offer one speculative explanation for why the increase appears much steeper for black men, Hispanic men, men from fathers with lower occupational status, and men with less education: that recent cohorts of disadvantaged men have disproportionately experienced incarceration (Pettit and Western 2004), which is an extreme constraint on heterosexual expression. Thus, we conclude that two broad kinds of changes affected trends, and impacted groups differently. A number of permission-giving cultural and social changes made it more possible and acceptable to have same-sex partners, but more so for women than men. Separate from this, disadvantaged men faced high and increasing levels of incarceration across birth cohorts, isolating men from women, often for years, and this may have prompted some who would not have done so otherwise to have sex with men.

Regardless of the group in question, a deeper understanding of the implications of our findings requires panel data that would tell us more about sexual life cycles. Panel data would allow us to know more precisely the variety of patterns for same-sex sexual experiences. Such patterns might include early explorations later abandoned for heterosexual relationships, experiences born of a temporary constraint such as incarceration that may or may not affect future choices, part of "coming out" as gay or lesbian, behavioral expression of an enduring bisexual identity, part of a pattern of sexual fluidity, or something else. At this point, no such data exist from a national probability sample, and they are sorely needed for future research.

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NOTES

1. Throughout the article, we use the term "other sex" rather than "opposite sex" when referring to women in relation to men and vice versa, because men and women are not the opposite of each other. When referring to women reporting sex with women, and men reporting sex with men, we use the term "same-sex" to describe the sexual behavior. We prefer language that refers to *an* other sex rather than *the* other sex so as not to imply that there are only two sexes, given that some individuals identify as nonbinary. However, the GSS provided only "male" or "female" as categories for respondents and their sex partners, so in these data male is the only other-sex choice for women and vice versa. Thus, we use language consistent with the limitations of our data.

2. Support for LGBT people may now be dropping (Goodman 2018), and the Trump Administration is rolling back some LGBT rights. These changes may result in fewer people having same-sex sex, but we will not know that for some time.

3. An exception to this generalization is the set of ritualistic sexual practices between men who identify as straight, discussed by Ward (2015) and Silva (2016). Yet, while the practices Ward and Silva identify may be seen as normal in some settings, the fact that the men they studied shun a gay or bisexual identity strongly suggests that men are stigmatized for sex with same-sex partners or nonheterosexual identities.

4. Very few prisoners qualify for conjugal visits (Goldstein 2015).

5. Although the first GSS was collected in 1972, our variables of interest regarding same-sex partners were not added until 1988 or 1989.

6. Sometimes, for brevity, we will refer to outcomes "since age 18" as what the respondent has "ever" done.

7. This identification problem is present if age, period, and cohort are entered linearly. The problem can be avoided by grouping some or all of the variables, but then results are quite sensitive to the categories into which each of the three are grouped.

8. The survey weight used was WTSSALL, as recommended by GSS staff. See http://gss.norc.org/Lists/gssFAQs/DispForm.aspx?ID=11.

9. We do not analyze cohort changes in sexual identity because a question on whether one identifies as heterosexual, bisexual, or gay/lesbian has been in the GSS only since 2008, thus making many fewer years of data available for identity than behavior, which the GSS asked about since 1988.

10. When using the alternative race measure as a sensitivity test, we find the predicted percentage of white, black, and Hispanic men having had both men and women as partners since age 18 to be similar in the early cohorts. Later, while black men increase more steeply than whites, Hispanic men are intermediate: Among those born 1966–1975, the predicted probability is 0.06 for white men, 0.12 for Hispanic men, and 0.16 for black men; those born 1976–1983 showed 0.07 for white men, 0.14 for Hispanic men, and 0.17 for black men; and last, those born 1984–2000 showed a predicted probability of 0.10 for white men, 0.15 for Hispanic men, and 0.20 for black men.

11. We note two limitations of this analysis of the relationship between whether men in the GSS have ever been incarcerated and have had sex with both men and women. First, the wording of the question combines individuals' prison *and* jail experiences. Although a measure that distinguished prisons from jail would be preferable (because most jail stays are short enough that they would be unlikely to lead men who prefer female partners to have same-sex sex), we note that this limitation actually makes the relationship we show between incarceration and having had sex with both men and women all the more striking. Second, because we have to limit the analysis to only 2012, the only year containing the question about incarceration, there are only 70 black men, and only 3 black men who have had sex with both men and women; because of this, we could not get a logistic regression to run using only black men. Our bivariate results for black men show a significant relationship ($p < 0.05$) between incarceration and sex with both men and women, but it is based on very few cases. The bivariate relationship for white men is large but not significant at $p < 0.05$.

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