

Sexual Orientation of Adult Sons of Gay Fathers

J. Michael Bailey, David Bobrow, Marilyn Wolfe, and Sarah Mikach
North-western University

J. Michael Bailey, Marilyn Wolfe, and Sarah Mikach, Department of Psychology, Northwest University, David Bobrow, Department of Psychiatry, North-western University.

We gratefully acknowledge the suggestions of David Uttall.

Correspondence concerning this article should be addressed to J. Michael Bailey, Department of Psychology, North-western University, 2029 Sheridan Road, Evanston, Illinois 60208-2710.

The sexual development of children of gay and lesbian parents is interesting for both scientific and social reasons. The present study is the largest to date to focus on the sexual orientation of adult sons of gay men. From advertisements in gay publications, 55 gay or bisexual men were recruited who reported on 82 sons at least 17 years of age. More than 90% of sons whose homosexual orientation could be rated were heterosexual. Furthermore, Gay and heterosexual sons did not differ on potentially relevant variables such as the length of time they had lived with their fathers. Results suggest that any environmental influence of gay fathers on their sons' sexual orientation is not large.

An appreciable minority of both gay men and lesbians have children (Bell & Weinberg, 1978), and although difficult to document, it seems likely that increasing numbers of openly gay and lesbian people are forming families. Development of children of gay and lesbian parents has begun receiving the attention of researchers (e.g., Patterson, 1992) for both scientific and social reasons. A primary scientific question is whether children of gay and lesbian parents are especially likely to become gay or lesbian themselves, and if so, why. The primary social question, whether gay and lesbian parents are as desirable as heterosexual parents, has arisen most vividly in child custody cases. The scientific and social issues are closely related, because a primary focus of expert testimony in custody cases has been the impact of being reared by a gay or lesbian parent on children's sexual orientations (Falk, 1989; Harvard Law Review, 1989).

Sexual Development of Children of Gay and Lesbian Parents

Children of gay and lesbian parents might be expected to have elevated rates of homosexuality because they receive both environmental and genetic input from their parents. At least three environmental transmission routes are conceivable. The most obvious possibility is that children may acquire their sexual orientations in part by imitating their parents. By this model (discussed generally by, e.g., Sears, Rau, & Alpert, 1965), a child identifies with his same-sex parent and thereby adopts the kind of love object preferred by that parent. An immediate problem with this model is that most gay men and lesbians have heterosexual parents and thus develop opposite to the model's prediction. Psychoanalytic theorists (e.g., Bieber, 1962) have attempted to resolve this paradox by hypothesizing that, as children, homosexual individuals identified with their opposite-sex parents. In men, such atypical identification supposedly results from an unusually close mother-son relationship coupled with a distant father-son relationship. In women, according to psychoanalytic theory, an especially antagonistic relationship with the mother impedes identification. Consistent with the theory, gay men tend to recall their fathers as having been emotionally distant and lesbians tend to report poorer

relationship with their mothers (Bell Weinber, & Hammersmith, 1981; Van den Aardweg, 1984). However the effect size compared with heterosexual individuals is weak and causal interpretation of the findings is problematic (Bed et al., 1981; Freund & Blanchard, 1983). Although, to our knowledge Psychoanalytic writers have not extended this theory to the development of children of gay and lesbian parents, it would be consistent with an increasing rate of homosexuality among the same-sex children of such parents, provided their relationship was not distant (which would impede identification).

Socialization is a second possible route by which children of gay and lesbian parents may have an increased likelihood of developing homosexuality. Gay and lesbian parents might conceivably either reinforce behavior that increase the probability of a homosexual outcome or else fail to discourage such behavior in their children. For example, many gay men and lesbians were atypical children with respect to their sex-typed behavior (Bailey & Zucker, 1995). If, because of their own experiences, they are more tolerant of such behavior in their children and cross gendered behavior is causally antecedent to homosexuality (as suggested by Grew, 1987, p. 382), their children would exhibit higher rates of homosexuality. Patterson's (1992) review found little evidence that children of gay and lesbian parents were atypical with respect to either gender identity or sex-typed behavior although available studies were insufficiently large to generate much statistical power. Alternatively, gay fathers and lesbian mothers may reinforce (or fail to discourage) other causally relevant behavior unrelated to gender identity or sex-typed behavior, but it is at present unclear what behavior might be relevant.

A third potential environmental route has been debated primarily in journals of opinion rather than in academic journals. Some writers (eg., Arkes et al., 1994; Krauthammer 1993; Pattullo, 1992) have suggested that destigmatizing homosexuality makes it easier for those who are so predisposed to become homosexual, and thus increases the rate of homosexuality in those cultures or subcultures in which it is destigmatizing. It is at least plausible that being reared by a gay or lesbian parent has the effect of making homosexuality a more acceptable alternative. People who have gay or lesbian acquaintances are relatively tolerant of homosexuality (Herek & Glunt, 1993; Schmalz, 1993).

No existing theory of parent-to-child environmental transmission of sexual orientation has received unambiguous empirical support. Studies have clearly demonstrated the importance of environmental determinants of sexual orientation (Bailey & Pillard, 1991; Bailey, Pillard, Neale, & Agyei 1993), but contrary to parent-to child transmission, these determinants appear primarily to operate within families to make siblings differ from each other (i.e., they are within-family environmental effects; Plomin & Daniels, 1987). Parent-to-child environmental transmission cannot presently be rejected however because of methodological limitations of existing studies, and because analyses from relevant epidemiological studies (performed from the framework of quantitative genetics) do not sensitively gauge the importance of relatively rare factors such as having a gay or lesbian parent. (This is because the magnitudes of effects due to particular environments or genes are weighted by their frequency; thus, rare environments or genes will contribute less to the heritability or environmentally estimates.)

Aside from environmental transmission, children of gay and lesbian parents would be more likely to develop homosexuality if there were additive genetic variation for sexual orientation. Additive genetic variation is the portion of genotypic variance that causes parent-child resemblance (Falconer, 1981; in contrast, non additive variation, such as dominance or statistic affects, decreases parent-child resemblance.) Although there is empirical support for partial genetic transmission of both male (Bailey & Pillard, 1991) and female (Bailey et al., 1993)

sexual orientation, the existence of additive genetic variation for male or female sexual orientation remains uncertain because of methodological limitations of studies to date (especially ascertainment problems; see Bailey & Pillard [1991] and Bailey et al. [1993] for extended discussion) and the inefficiency of twin studies in distinguishing additive and non additive genetic variation (Grayson, 1989). Furthermore, evolutionary considerations argue against the likelihood of substantial additive genetic variation for traits related to fertility (Falconer 1981), as sexual orientation seems to be. Although many gay and lesbian people reproduce, their fertility is markedly lower than that of heterosexual people (Bell & Weinberg, 1978).

Neither environmental nor additive genetic transmission has yet been established for either male or female sexual orientation. Indeed it remains unclear if children of gay and lesbian parents have elevated rates of homosexuality. Patterson (1992) reviewed studies of children of gay and lesbian parents, including their adjustment, sexual Orientation, gender identity, and sex-typed behavior, and concluded that evidence suggested little difference between such children and those of heterosexual parents. However, available studies were both few and modestly sized. For example, the largest study (Miller, 1979) concerning offspring sexual orientation consisted of 27 adult daughters and 21 adult sons of gay men.

It is important to note that at this stage of research, sons and daughters should be considered separately, because it is plausible that they are affected differently. For example sexual orientation may be differentially malleable for the two sex if so offspring of the more malleable sex could be especially influenced by parents' sexual orientation. Similarly, a child may be differently affected according to whether the father or mother is homosexual and thus offspring of gay fathers should be considered separately from offspring of lesbian mother. Moreover, some explanation such as identification, depend on whether the child is the same or the same sex as the homosexual parent. Thus, to provide a complete answer, researchers must eventually fill the four cells of a Parent (gay father vs. lesbian mother) X offspring (son vs daughter) table-of-outcome data.

Social Implications

Few rights are as fundamental as the right of parents to raise their own children. Yet some courts have viewed the prospect of lesbian and gay men raising children so negatively that they have denied custody to such parents solely on the basis of their sexual orientation. Those opposed to granting custody to gay and lesbian parents have cited several concerns, including the possibilities that such parents are less mentally healthy, that they will molest their children, and that such children will be stigmatized by their peers (for reviews of those arguments, see Falk 1989; Harvard Law Review, 1990; Kleber Howell, & Tibbits-Kleber, 1986). Perhaps the most frequently noted concern, and the one most relevant to this article, is that children raised by gay or lesbian parents are especially likely to become gay or lesbian themselves (Falk, 1989).

Even if children of gay and lesbian parents were more likely to become homosexual, we do not believe that this would be a problem, much less that it would justify forfeiture of custody. Nevertheless, a substantial proportion of Americans appear to disagree (Schmalz 1993). If Patterson (1992) is correct that children of gay men and lesbian are no more likely than children of heterosexual people to become homosexual then it is unnecessary to reach consensus on the desirability of homosexual versus heterosexual outcomes, at least in the context of child custody. It is of course impossible to prove the null hypothesis but it should be possible to determine whether being reared by a homosexual parent makes an appreciable difference in a child's sexual orientation.

OVERVIEW

This article reports the largest study to date of adult sons of gay fathers. We focused on one cell of the table of outcome to maximize sample size, and sons of gay father were most relevant to other research we were pursuing when we began this project (Bailey & Pillard 1991). We interviewed gay fathers and a majority of their adult sons, and we focused particularly on the sons' sexual orientations. Finally, we examined potential predictions of sons' homosexuality.

Method

The methodology of this study closely followed that of several prior studies (Bailey & Benishay, 1993; Bailey & Pillard 1991; Bailey et al., 1993). They can be consulted for additional details regarding our procedure.

We recruited Gay and bisexual fathers by means of advertisements in homophile publications in Chicago, St. Louis, Milwaukee, Dallas, San Antonio, Austin, and Houston. The advertisements stated that we sought to study Gay or bisexual men with sons at least 17 years old and gave the phone number of our laboratory. Subjects who met inclusion criteria were scheduled for a 1-hr interview. We interviewed 55 biological fathers. All of the interviews were conducted with informed consent. The interview included questions concerning the father's marital histories: the quality of current relationships with both the sons and the son's mother, the length of time fathers lived with sons, and the frequency of contact between fathers and sons. In addition, we asked about both father and sons' sexual orientations.

Fathers reported on 82 sons. At the conclusion of their interview we asked fathers for permission to contact sons through questionnaire, which fathers examined before making their decision. The premise of the questionnaire and accompanying cover letter was that we were studying the degree to which unspecified traits ran in families. We did not mention our interest in sexual orientation. The questionnaire included a variety of questions about social attitude, personality, and family relationships, in addition to five questions regarding sexual orientation. If a son did not respond to our initial mailing within approximately 1 month, we sent him an additional questionnaire. We halted our efforts only if at least two mailings of the questionnaire were unsuccessful and (a) no telephone number was available for the son, (b) repeated telephone calls were unsuccessful or (c) the son declined to participate. Fifty-seven fathers allowed their sons to be contacted, 4 of whom responded by questionnaire. Additional 2 sons agreed to a phone interview in lieu of filling out questionnaires. Thus complete data were available for 43 (52%) of the 82 sons.

We assessed sons' sexual orientations in two ways. First we asked fathers whether they believed their sons' sexual orientation to be heterosexual, homosexual, or bisexual. In addition, each father also rated his confidence regarding each son's sexual orientation using a 4-point scale, ranging from 1 - *completely certain*, indicating that the son had told him outright; to 2 - *virtually certain*, indicating that he had a high degree of certainty based on the son's behavior alone; to 3 - *moderately certain* and 4 - *uncertain*, both of which represented lower levels of confidence. Second questionnaires sent to sons asked them to rate themselves as heterosexual, bisexual, or homosexual. Sons completing questionnaires also gave ratings of their attraction to men and women, as well as separate Kinsey ratings for adult fantasy and behavior (Kinsey, Pomeroy, & Martin, 1948). Kinsey scores range from 0 (*completely heterosexual in fantasy and behavior*) to 6 (*completely homosexual in fantasy and behavior*).

Sons' self-rating of sexual orientation were used when available. However these data were lacking for a large percentage of sons. Previous research has found that Gay and lesbian probands are quite accurate at predicting siblings' self-ratings of sexual orientation, when they do so with confidence (Bailey & Benishay, 1993; Bailey & Pillard 1991; Bailey et al., 1993; Pillard & Weinrich, 1996). The accuracy of gay fathers in rating their sons is, of course a separate though related empirical question, which we address herein.

Results

Table 1 presents some descriptive information about the fathers. The large majority of fathers (89%) currently identified themselves as gay rather than bisexual. Although all of the fathers had been married, the large majority (91 %) were separated or divorced.

Table 1
Characteristics of 55 Gay Fathers

Item	%	m	SD
Age(yew)		35.5	9.0
Marital status			
Currently married	5		
Widowed	4		
Separated or divorced	91		
Sexual orientation			
Homosexual	89		
Bisexual	11		
Age when family became aware of homosexuality, if ever (yew)		35.3	12.5

Table 2 contains the results of fathers' ratings and sons' self-rating of sons' sexual orientation (heterosexual vs. Non heterosexual). In the 41 cases in which fathers were at least "virtually certain" about their sons' orientation and sons provided data as well fathers incorrect only once, $\kappa = .88, p < .001$. The lone mistake occurred when a father rated his son as heterosexual and the son rated himself bisexual. Because of the high degree of accuracy of fathers' rating, we used them when sons' self-rating of sexual orientation were unavailable, provided fathers' ratings were made with at least "virtual certainty". Prior research (Pillard & Weinrich, 1986) has suggested that when participants are less certain, their accuracy diminishes appreciably, and more specifically, they tend to overassess homosexuality. Thus, we omitted sons for whom self-rating were unavailable if father were only moderately certain or uncertain. Of 7 sons omitted for this reason, 4 were believed by their fathers to be heterosexual, 2 were believed to be nonheterosexual and 1 son was given no rating by his father. Table 3 contains the frequency of heterosexuality and nonheterosexual among the sons. Of sons whose sexual orientation could be rated with confidence, 9% (7/75) were nonheterosexual and 91% (68/75) heterosexual.

Table 3 also provides some descriptive data concerning some variables potentially relevant to environmental hypotheses of father-son resemblance. For example, there is a wide range of values for the number of years sons lived with fathers, from 1 to 28 years. An environmental theory of father-son resemblance for sexual orientation would probably predict that sons who lived the longer with their father most likely also be Gay. This was not true in the present sample, however In fact, gay sons had lived for a somewhat shorter time with their father 6.4 years versus 11.2 years for heterosexual sons, though this difference was not significant, $t(72) = 1.5, p = .15$. Nor was sons' sexual orientation related to the frequency of contact with there

fathers during the previous year, $t(70) = 0.1$, $p = .90$. Sons' sexual orientation was also unrelated to the degree that sons presently accepted their father sexual orientation $t(53) = 0.1$, $p > .70$, and to the quality of the present father-son relationship, $t(69) = -.30$, $p > .75$. (Degrees of freedom varied because some participants did not answer all questions.)

Table 2
Sexual Orientation Ratings of 82 Sons of Gay Fathers by Sons and Their 55 Fathers

Rating of son by father	Self-rating by son		
	Heterosexual	Nonheterosexual	Could not contact
Father at least "virtually certain" of son's orientation			
Heterosexual	36	1	31
Nonheterosexual	0	4	1
Father less confident of son's orientation	1	1	7

We repeated these analyses using four alternative indicators of sons' sexual orientation: combined behavior and fantasy Kinsey rating for adulthood, combined Kinsey rating for adulthood, sexual interest in men, and sexual interest in women. These variables made finer distinctions than *heterosexual-homosexual* and, in that respect, provided potentially more powerful tests. On the other hand these data were available only for sons who participated, and thus sample sizes for these analyses were somewhat smaller, ranging from 33 to 40. The correlations between these indicators of sexual orientation and quality of the, father-son relationship, son's acceptance of father's homosexuality, and the length of time fathers and sons lived together uniformly low ($r < .15$) and nonsignificant ($p > .35$).

Discussion

Results of this study are consistent with corresponding figures in Patterson's (1992) review, suggesting that approximately 10% of sons of gay or bisexual men also become nonheterosexual. Relevant studies included fewer than 50 sons of gay fathers; thus, this study substantially enlarge the available database. Before examining the scientific and social implications of our findings, address the study's methodological limitations.

Methodological Issues

Two limitations of this study should be acknowledged in any discussion of its implications. The more serious limitation concerns the recruitment of gay fathers by mean of advertisements. This recruitment strategy cannot guarantee a representative sample of either gay fathers or sons of gay fathers. The most important potential bias is that fathers' decisions to participate might depend, in part, on their sons' sexual orientations, a kind of bias that Kendler and Eaves (1989) called *concordance-dependent ascertainment bias* in the context of twin research. We suspect that if this kind of bias occurred, it worked to inflate the rate of homosexuality among the sons in our sample. For example, fathers with gay sons may have been more inclined to volunteer for a study of gay fathers because they believed that we would find them especially interesting or because they had less concern about potential friction with their sons over their involvement in such a study. However the existence and direction of concordance-dependent bias are not ultimately resolvable with data from this study.

The second limitation concerns the absence of a control group. Typically in studies concerned with familial aggregation, probands with and without the trait of interest are recruited and their relatives compared. This design allow the comparison of participants recruited by use of identical strategies and assessed with identical instruments. No control group of Heterosexual fathers was recruited for the present study. However, at least two general bodies of available data can be used to derive rates for comparison: recent population survey of homosexual behavior and family-genetic studies of homosexuality using other kind of relatives.

Several recent large population based surveys have provided generally consistent estimates for the frequency of male homosexual behavior in contemporary western societies (ACSF Investigators, 1992; Billy, Tanfer, Grady, & Klepinger, 1993; Johnson, Wadsworth, Wellings, Bradshaw, & Field, 1992). The estimate varied with respect to the stringency of the criterion from 1% to 2% (for exclusive homosexuality over a several-year period) to nearly 5% (for any lifetime homosexual experience). Our criterion, homosexual or bisexual identification, is probably relatively stringent, and thus the percentage of men meeting it was nearer the lower figure. If so, it could be argued, the rate of homosexuality in the sons (9%) is several times higher than that suggested by the population-based surveys and is consistent with a degree of father-to-son transmission. The 95% confidence interval of the sons' rate of homosexuality, 3% to 16%, exceeds the smallest population-based estimate (Billy et al., 1993).

Table 3
Characteristics of 82 Adult Sons of gay Fathers

<u>item</u>	<u>Range</u>	<u>m</u>	<u>Sd</u>	<u>n</u>
Age (years)	17-43	25.3	6.2	
Year lived with father	1-28	10.9	8.1	
Quality of father-son relationship ^a	1-4	1.6	0.9	
Knowledge of father's homosexuality ^b	1-4	3.5	1.0	
Acceptance of fathers homosexuality ^c	1-4	3.7	0.7	
Frequency of contact (no. of days, Last year)	0-365	89.7	112.0	
Sexual orientation				
Heterosexual			68	
Nonheterosexual			7	
Unable to rate with confidence			7	

- a) *From 1 = very good to 4 = poor*
 b) *From 1 = none to 4 = definitely knows*
 c) *From 1 = very rejecting to 4 = accepting.*

Comparison of our rates with those of the population-based surveys may be inappropriate, however. We have noted that our methodology probably inflated the rate of homosexuality among sons. In contrast, the population surveys may have underestimated the population rate of homosexuality, as a result of noncooperation or underreporting of gay and bisexual men (Fay, Turner, Klassen, & Gagnon, 1989). In another study (Bailey & Pillard, 1991), we examined rates of homosexuality in relatives of gay and bisexual men recruited similarly to the gay fathers of the present study, and those results may yield more appropriate comparisons. In that study, we recruited gay men with a twin or adoptive brother. The rate of homosexuality among sons (9%) was comparable with the rate we obtained for adoptive

brothers (11 %) and was significantly lower than what we obtained for dizygotic (DZ) twins (22%), $\chi^2 (1, N = 129) = 4.2, p < .05$. Thus, the rate of homosexuality in sons of gay fathers in the present study was lower than that obtained for another kind of first-degree relatives (DZ twins) of comparably recruited participants in a prior study. There are at least three possible explanations. First, concordance-dependence ascertainment bias may have been greater in the previous study, creating a spurious difference. Second, DZ twins may share environmental influences not shared by fathers and sons. The third possible explanation is genetic. Siblings share one fourth of nonadditive genetic variation, but parents and offspring share none. Thus nonadditive genetic effects would cause greater resemblance between brothers than between fathers and sons. This pattern could also be attributable to X-linkage, a possibility supported by a recent report (Hamer, Hu, Magnusm Hu, & Pattatucci, 1993).

Implications

The present study cannot definitely answer the basic question of whether sons of gay fathers have elevated rates of homosexuality. It does, however, support one conclusion that, although quite general, may also be important: The large majority of sons of gay fathers are heterosexual. It is difficult to imagine that any methodological limitation of this study biased results to such an extent that a future, more careful study would contradict this conclusion. If made sexual orientation is somewhat heritable, as we have argued elsewhere (Bailey & Pillard 1991), an elevation in the sons' rate of homosexuality consistent with present results could be explained genetically. Consistent with a genetic hypothesis, the rate for sons was much lower than what we obtained for monozygotic (MZ) twins (52%), $\chi^2 (1, N=132) = 29.0, p < .001$. Studies that use more careful sampling techniques will be necessary to test for a modest elevation in the rate of homosexuality among the offspring of gay and lesbian parents and to determine whether any such elevation is genetic or environmental or both.

Inconsistent with environmental transmission, sexual orientation was not positively correlated with the amount of time that sons lived with their fathers. However, because there were only 7 nonheterosexual sons, this was not a statistically powerful test. If replicated in a larger sample, this finding would provide strong evidence against an environmental influence of gay fathers on their sons' sexual orientations. Although our results do not absolutely exclude the possibility of father-to-son environmental transmission, they suggest that any such influence is not large. As we already noted, conclusions from the present study may not apply to daughters of gay men or to children of lesbians.

The available evidence, including this study, fails to provide empirical grounds for denying child custody to gay or lesbian parents because of concern about their children's sexual orientation. The fact that sons' sexual orientation was unrelated to the time lived with fathers is especially relevant, because that analysis represented a relatively direct test of the assumption that custody decisions affect children's sexual orientation. Although we reemphasize the need to replicate the finding by using larger samples, our study suggests that allowing gay men to retain custody of their sons does not substantially increase the likelihood that the sons will become gay adults.

At least two kinds of future studies may provide valuable information about the sexual development of offspring of gay sons and lesbians. Investigations of adult children will be most useful if they explore specific hypotheses rather than merely focus on the rate of homosexuality among the children. Exploring which, if any, variables distinguish children

who became heterosexual from those who became homosexual could support or falsify specific developmental theory. Moreover, these analyses may be less sensitive to methodological difficulties such as potentially biasing self-selection. At least two variables are especially relevant: the degree of exposure of a child to a gay or lesbian parent, and the degree of genetic relatedness between parent and child. Exploring the importance of the former allow tests of environmental hypotheses. Exploring the importance of the latter for example, by comparing natural children and stepchildren of gay and lesbian parents, allows an examination of the importance of genetic influences.

An alternative strategy is to recruit gay and lesbian parents whose children are too young to have established sexual orientations, then to follow them prospectively. Although this design would be more expensive and onerous, it will help minimize concordance-dependent ascertainment bias and allow more confidence in frequency estimates. Another advantage to this approach is that specific hypotheses could be tested prospectively rather than retrospectively. The ultimate goal of studies in this area should be to illuminate the mechanism, as well as the fact, of any environmental or genetic transmission of sexual orientation.

March 1994