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Sexual Orientation Discrimination in Hiring

by

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ABSTRACT

Little research has been done to examine discrimination against gays and lesbians in the labor market. Badgett (1995) was the first to investigate labor market outcomes of gays and lesbians using a random data set. While her results suggested lower earnings for lesbians compared to heterosexual females, later studies indicated the contrary and indeed consistently documented an income premium for lesbian women. Considering the wage penalty we observe for most social minorities in the labor market (women, ethnic minorities), this result appears as striking. The apparently "privileged" labor market situation can be reconciled with the existence of labor market discrimination, however. Problems like sample selection and unobserved heterogeneity - in particular lesbians' violation of stereotypical female gender roles - might be responsible for their higher earnings.

To investigate whether discrimination against lesbians actually does exist, a labor market experiment is conducted. Job applications of candidates, who are equivalent in their human capital but differ in their sexual orientation, are sent out in response to job advertisements. Furthermore, to test whether increased masculinity affects labor market outcomes, the applicants differ in their perceived gender identity.

While results show a strong negative effect for lesbian orientation, gender identity does not have a significant overall impact on hiring chances.

Keywords: Sex-Discrimination, Experimental Economics, Sexual Orientation

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1 Introduction

A number of demographic groups are reported to be affected by labor market discrimination: women, ethnic and national minorities, disabled workers, as well as religious and sexual minorities have been observed to face unfavorable labor market outcomes. Most studies on discrimination focus on earnings differentials by race or gender since corresponding data is more readily available. Nevertheless, not only do these groups represent merely a fraction of the possibly discriminated population, but discrimination can also take on different forms, i.e. can also occur in hiring, promotion and firing.

This study investigates discrimination against lesbians. The demographic group of lesbian workers is of particular interest, since - contrary to other social minorities, including gay men - they have repeatedly been shown to earn *higher* wages than their reference group, i.e. heterosexual women. Despite their apparently privileged labor market status, 16-46% of gay and lesbian survey respondents report to have experienced some form of labor market discrimination (see Badgett et al., 1992, for a review of surveys). These seemingly contradictory findings can be reconciled however. A number of reasons suggest that lesbians' earnings are overestimated. For example, a reduced amount of household responsibilities and higher investments in on-the-job training can be responsible for lesbians' surprisingly high incomes. After a brief review of the literature on discrimination based on sexual orientation in section 2 of this paper, these differences between lesbians and heterosexual women are discussed in more detail. Since some of the wage differentials relate to the sexual division of labor in the household, it turns out that examining lesbians' higher earnings can also help us to partly understand wage differentials between men and women. Furthermore, statistical reasons which bias lesbians' earnings upwards are presented. Individuals with higher incomes, for example, are more likely to reveal their sexual orientation to an interviewer and accordingly be classified as lesbians.

Since earnings regressions do not seem to adequately reflect discrimination, this paper takes a different route to assess differential treatment by using an experimental technique to gather representative data on labor market outcomes of lesbians. Labor market experiments can best be used to investigate discrimination in hiring and have the advantage that typical problems of earnings regressions can be avoided. In particular, identical productivity as well as sexual orientation of workers can be controlled for by the researcher. Section 3 describes the design of the experiment, the following section presents the results. The concluding sec-

tion 5 discusses how lesbians' documented discrimination in hiring and their favorable outcomes in earnings can be conciliated.

2 Sexual Orientation Discrimination - Evidence and Theory

2.1 Empirical studies on discrimination against gays and lesbians

While the labor market status of women and ethnic minorities has been investigated extensively over the last decades, it was only lately that econometric methods to examine discrimination have been adopted to study the labor market situation of gays and lesbians.

One reason for this neglect has been the lack of available data from representative samples to study this demographic group. Biased data of the higher educated, higher earning readers of gay and lesbian magazines - collected from marketing research companies aiming to sell advertising space - have repeatedly been used to misrepresent gays and lesbians as a wealthy class (see Badgett, 1997, for a critique). Only recently have surveys with representative samples included questions on sexual orientation, namely the US General Social Survey (GSS), conducted by the National Opinion Research Center, and the 1/1000 Public Use Microdata Sample (PUMS) of the US Census of Population and Housing. In response to the HIV epidemic, the GSS introduced questions on sexual behavior in 1989 and now provides information on labor market variables, as well as on sexual behavior with partners of either sex. The US census identifies individuals living in a household by their relationship to the householder who owns or rents the home. In 1990 the census introduced the category "unmarried partner", which allows the researcher to identify gays and lesbians as unmarried same-sex couples.

Badgett (1995) was the first to apply standard econometric techniques to study discrimination based on sexual orientation. Analyzing pooled GSS data (1989-1991) by classifying people according to their number of same-sex experiences, she found that gays and lesbians are paid less than the general population – contrary to the common belief that they constitute one of the most affluent groups. While the wage penalty of gay and bisexual men was 11 – 27% compared to their heterosexual peers, the findings for lesbian and bisexual women suggested an income loss of 12 – 30%, but were not significant for all specifications.

The census PUMS data not only allows individual but also household income to be analyzed.[1] Klawitter and Flatt (1998) found more ambiguous results about the effect of sexual orientation. They showed that, according to the PUMS, male same-sex households obtain the highest average household incomes, while individual incomes are significantly lower than those of married men. When controlling for human capital and geographical region, individual earnings of gay men are similar to those of unmarried men. The reverse is true for lesbian women: While their average household income is lower than that of married couples, the individual incomes of lesbians are higher than those of unmarried women, while married women earn the least. Nevertheless, the authors conclude that most of these differences in incomes are due to worked hours. When the regression sample was limited to full-time, full-year workers, only small differences in incomes were found for lesbians as compared to married women, and these differences lacked significance.

Black et al. (2001) re-examined Badgett's original results by the use of pooled, cross-sectional data from the 1989-96 GSS with different classifications for sexual orientation. Classifying individuals only according to their recent sexual behavior leads to a positive and significant coefficient for lesbian orientation on earnings, while the negative effect for gays persists. Blandford (2000) uses the GSS data for the same time period, implementing interaction terms for marital status and sexual orientation instead of including these variables separately. He finds that single men suffer a wage penalty of about 14% in comparison to their married peers. For unmarried gay and bisexual workers he reports a wage penalty of 30 – 32% compared to married, heterosexual men. Contrary to usual findings, Blandford and Black et al. do not identify a significant effect of marriage for heterosexual women. For bisexual and lesbian women compared to married heterosexual women, on the other hand, Blandford reports a wage premium in the range of 17 – 26%.

Clain and Leppel's (2001) study of the PUMS 1990 data investigates the effect of cohabitating with different sex partners. Introducing various interaction terms instead of simply using a sexual orientation dummy, they once more find that men living with male partners

[1] Although the GSS provides very useful information, it only allows the classification of *behavioral* lesbians, gays, or bisexuals, but does not inform about the self-identification of the individual. However, as Badgett (1996) pointed out, gay identity might in fact trigger unfavorable treatment more than behavior. This might not only be due to employers' fear of collective action to change employment practices and workplace environment in favor of gays and lesbians, but occasional same sex experiences might as well be less detected and more accepted if no gay identity is present. The inclusion of all *behavioral* bisexuals - some of who might be living standard heterosexual lives - reduces the observed wage gap. On the other hand, the PUMS data, which provides information about cohabiting same-sex partners, is much more likely to capture self-identified gays and lesbians who are not only temporarily experimenting with their sexuality.
While the GSS sample employed by Badgett included 34 bisexual or lesbian women and 47 bisexual or gay men (of a total of 1680 observations), the PUMS allowed Klawitter and Flatt to identify about 6800 same-sex cohabiting couples.

have lower incomes than other men, while women with female partners earn a higher paycheck than other women. Allegretto and Arthur (2001) analyze gay and heterosexual men's earnings on the basis of the PUMS 5% census data and observe a wage difference of -16% comparing gay and heterosexual married men, and a wage differential of -2% comparing gay and heterosexual unmarried men.[2]

While the new findings on gay men's wages seem intuitive, the empirical evidence on lesbians' higher incomes in comparison to their heterosexual peers is astonishing.

2.2 Reasons for differences in earnings

One of the reasons for these surprisingly high earnings of lesbians compared to their heterosexual peers might be differences in personal characteristics, i.e. *unobserved heterogeneity*.

2.2.1 Unobserved heterogeneity

The adopted *gender role* would be one example for such differences in characteristics. Women's studies scholars distinguish between the terms "sex" and "gender", sex referring to the biological state of being male or female, while gender stands for roles and characteristics assigned to men and women by society, i.e. femininity and masculinity. Although women by sex, lesbians are documented as often behaving in more manly ways and having a more masculine gender, i.e. being more dominant, autonomous, assertive and detached - in short more masculine - than heterosexual women (see Riess et al., 1974). Since, as Blandford (2000) argues, employers adhere to the ideal of masculinity which is associated with labor market success, “more masculine” lesbians might be financially rewarded, while gay men are penalized. Clain and Leppel (2001) follow the same argument, suggesting that "employers, coworkers, and/or consumers are discriminating in favor of the personality characteristics of the stereotypical heterosexual male", which leads to a relative advantage for lesbian women.

Most conceivable differences between heterosexual and lesbian women seem to be driven by the specific organization of same-sex partnerships, however, and can be best discussed in reference to the heterosexual family.

[2] They calculate a marriage premium of 14%, which leaves an unexplained differential between gay and married heterosexual males of -2%, and conclude that most of the wage gap of gays can be explained via the marriage premium.

Marriage and the heterosexual family

It has been a long established fact that while men earn a "marriage premium" (see e.g. Gray, 1997), wages of married women are lower than those of their unmarried counterparts. The most common economic rationale behind this is that married partners maximize joint production through a division of labor within the household, which leads women to forgo income in the labor market for additional household production, while the contrary is true for men (see Becker, 1991).

Marriage does not necessarily need to affect current productivity though, but might be simply seen as a *signal* for job commitment. The expectation that married males function as primary income earners in their families, while married women quit jobs with childbirth, leads to men's higher expected commitment to the job, and raises their wages. These expectations can also explain the frequent existence of marriage bars in the early 20th century, when employers did not hire married women or women with children (see Goldin, 1990). As always, statistical discrimination is the result of decision-making based on expectations. In a situation of incomplete information, a fully career-oriented, married woman will not be recognized and will receive average female wages. Obviously, yet-unmarried individuals might also be affected by different expectations of job dedication by gender.

Another reason for earning differentials by marital status might be an unobservable selection effect. It is conceivable that men who are successful in the marriage market possess characteristics which are equally valued in the labor market. Black et al. (2001) report that men with no sexual activity (particularly over a longer time period) obtain substantially lower earnings, which indicates that men who have no sexual partners are equally unattractive in the labor market. Nevertheless, no effect of sexual activity on female wages has been found.

In which way might gay and lesbian couples now deviate from heterosexual pairs? First of all, gays and lesbians have been shown not to adhere to the heterosexual division of labor, where primarily one partner, the woman, is responsible for household tasks.[3] This is economically rational, since members of same-sex relations often have similar abilities and labor market opportunities which do not allow them to make use of comparative advantages. Furthermore, since most countries do not offer a legal substitute for marriage, specializing in housework becomes a risky choice. Since gay and lesbian couples rear children less frequently, there is less need for a homemaker as well.

[3] For a review of the literature see Giddings (forthcoming).

As a result, lesbians might be more productive in the workplace, due to reduced household responsibilities, and obtain higher wages than heterosexual women. Gays, on the contrary, might have to increase their amount of homework in comparison to heterosexual males, which lowers their labor market productivity as well as their wages.

But not only the reduced burden of housework might make lesbians more productive. It is as well plausible, as Clain and Leppel (2001) suggest, that lesbians have higher investments in on-the-job-training. Such investments pay off because lesbians expect more continuous labor market participation than heterosexual women who more often face career interruptions due to childbirth.[4]

Increased productivity can as well be the result of mere necessity. Since lesbians cannot acquire income transfers from a spouse (see Becker, 1991), they might put extra effort into market work. Gay men, on the contrary, have fewer obligations to pay such transfers to family members than their heterosexual colleagues. Consequently, they do not need to put effort into earning a "marriage premium". Nevertheless, it should be added that lesbians as well as gay men might, in fact, put higher effort into work. Badgett (1995) suggested that gays and lesbians might try to compensate for their social stigma by turning into overachievers and working extra hard.

Let us consider next that employers' expectations about the labor market commitment of men and women are responsible for women's lower wages. In this case, open lesbians should earn higher incomes than heterosexual women, since the probability that they drop out of the labor market due to pregnancy is much smaller. On the contrary, gay men are much less likely to be the primary income earner of a household and might be regarded as less steady employees than heterosexuals – a fact that leads to their lower incomes.[5]

2.2.2 Statistical reasons for wage differentials

So far, only unobserved heterogeneity has been discussed as a reason for lesbians' higher earnings, but there might be statistical reasons as well: Blandford (2000) reports that lesbian and bisexual women are more successful in male-dominated, well-paid occupations than their heterosexual peers and suggests that even *controlling for occupations* at the 2-digit level

[4] This is particularly crucial since the GSS and PUMS only give information about the potential experience of workers, while the actual job experience might be higher for lesbian than heterosexual women (some of this effect, however, is captured by controlling for the number of children).

[5] Only one of the previously established facts could raise the incomes of gay men relative to those of unmarried heterosexuals. Many gay men might possess characteristics which would not only be beneficial in the labor market but also in the marriage market, only they decide not to marry because of their sexual orientation. Consequently, they should obtain higher earnings than unmarried heterosexuals who lack those characteristics.

might be *insufficient* to capture all effects of occupational clustering. Consequently, some of lesbians' higher incomes might be attributable to job sub-categories which are not adequately captured by the data. Furthermore, it is most probable that the GSS and PUMS suffer from *sample selection bias*. Higher income gays and lesbians are more willing to disclose their sexual orientation. As a result, their observed earnings are upwardly biased.

Last but not least, the empirical data suffers from one additional major drawback: Both available data sets do not provide information about *disclosure* at the workplace, which is a precondition for direct labor market discrimination by employers. Many gays and lesbians choose not to reveal their sexual orientation on the job to avoid mobbing and employment discrimination, and pass as heterosexuals.[6] Passing strategies to conceal one's sexual preference might include avoiding social interactions with other staff members or choosing jobs where less interaction with coworkers is necessary on and off the job.[7] Badgett (1996) reports from survey data that significantly fewer lesbians out themselves on the job than gay men.[8] This might be another reason why, on average, lesbians do not suffer from the same income loss as gay men.

Due to these specific flaws in the available data, all the previously mentioned empirical research, although highly interesting, cannot inform about what some of the authors claim to investigate: labor market *discrimination* against equally productive gays and lesbians. Obviously, one can interpret the measured wage differentials as a composite dis/advantage of those gays and lesbians who out themselves to the interviewer, irrespective of the fact that these differences stem from a conglomerate of reasons, e.g. different productive characteristics, workers' concealing behavior and statistical grounds.[9] From a policy perspective however –

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[6] To reduce the high psychological costs of involuntary disclosure, they might prefer to work in jobs where coworkers hold more tolerant opinions towards gays and lesbians. Badgett and King (1997) have found that gay men are, in fact, clustered in more tolerant occupations (e.g. professional and technical jobs), while lesbians seem to be over-represented in less tolerant professions (e.g. in service and operative jobs).

[7] Such passing strategies can lead to lower productivity and lower wages. Badgett (1995) calls the resulting income loss "indirect discrimination".

[8] The question by the San Francisco Examiner: "Have you told your co-workers about your sexual orientation?" (400 respondents) was answered with "yes" by 62% of all gay men and 33% of all lesbians (see Badgett, 1996, p. 42). This sex difference is surprising, since lesbians are less likely to get pregnant than heterosexual women - which might be a desirable feature for employers. As a result, lesbians would have some incentive to out themselves on the job. The contrary is true for gay men, who might be considered less steady employees than heterosexual breadwinners.

[9] The effect of *direct* discrimination will always be underestimated, since not all gays and lesbians are out on the job. By definition, direct discrimination cannot happen to gays and lesbians, whose sexual preference is unsuspected. Assuming there is no indirect discrimination, that effort is independent of sexual orientation, and only half of all gays and lesbians from the survey are disclosed at the workplace, the measured discrimination coefficient – mingling the impact on open and passing gays and lesbians – is only half as high as the real discrimination.

e.g. when fighting direct discrimination or advising gays and lesbians whether to come out – the existence and amount of *direct* employer discrimination is crucial.

This study focuses on discrimination against lesbians, since empirical results assigning this group higher earnings than heterosexuals seemed counterintuitive, considering the disadvantage most social minorities face in the labor market. Consequently, the goal was to find out whether lesbians are really confronted by any labor market discrimination, or whether they in fact constitute a relatively advantaged group.

3 Experimental Investigation

One possibility to gain more knowledge about actual employer discrimination based on sexual orientation is to collect data via an experimental investigation. The advantage of an experiment is the full control the researcher has over her data. A carefully setup design allows to test for what is of central interest: *direct discrimination* against openly lesbian employees with equal productivity compared to the heterosexual control group, without having one's data flawed by sample selection and unobserved heterogeneity.

In this study we use a common experimental methodology called *Correspondence Testing* to examine the hiring chances of lesbians. Résumés of applicants who were matched in all relevant productive characteristics, like age, schooling and job experience, but differed in their indicated sexual preference, were sent out in response to job advertisements. All candidates indicated being single in their CVs to avoid any differences in expected productivity. If one applicant was invited to an interview by an employer, while the other was not, this was assigned to discrimination. With this technique, the labor market outcomes of two identical individuals of equal productivity, who only differ in respect to their demographic group, can be compared directly.[10]

As has been noted before, some economists (Blandford, 2000; Clain and Leppel, 2001) have suggested, that lesbians' increased masculinity, their similarity to the stereotypical male,

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On the other hand, we have little information about the size of the *indirect* discrimination effect, apart from being greater or equal to zero. Concealing one's gay or lesbian identity may restrict entry to some occupations or peer groups and therefore reduce earning capacities. Gays and lesbians might be willing to accept wages lower than those when disclosed, to avoid the psychological costs of being "outed" to the public. Consequently, the wage loss due to indirect discrimination might be even larger than the one due to direct discrimination.

[10] Certainly this experimental method does impose some costs on the employer, as résumés of applicants who are actually not available have to be evaluated, but these costs are not infrequent, as workers often want to test their outside opportunities to increase their bargaining situation at the current job (Riach and Rich, 1995).

is responsible for their relatively high incomes. Masculinity (being assertive, dominant, etc.)[11] might either constitute a productive personality trait in the labor market, or employers simply have preferences for more masculine workers. Since our experiment gave us full control over workers' characteristics, we wanted to investigate whether those "masculine characteristics" can actually explain lesbians' higher earnings. We found this question particularly interesting, since psychologists have previously argued that one of the reasons why lesbians are *disliked* is their frequent violation of gender stereotypes and display of “inappropriate” gender mannerisms (“butch” and “femme”). Laner and Laner (1980) found that it is personal style as well as sexual preference which triggers a dislike of gays and lesbians. They showed that when a lesbian performs average heterosexual femininity, this in fact *reduces* dislike against her. Consequently, masculinity might not only be beneficial but could as well trigger a taste for discrimination.

Different treatment when equally productive?

A number of reasons why direct discrimination based on sexual orientation might occur are conceivable. In comparison to race and sex discrimination, unfavorable treatment is less likely to be motivated by employers’ beliefs in different group averages of productivity, i.e. statistical discrimination (Phelps, 1972; Arrow, 1973). Gays and lesbians are the only social minority that is actually brought up within a majority culture (by heterosexual parents) and cannot be identified solely by their looks (skin color, sex).[12] In contrast to females and ethnic minorities, gays and lesbians are socialized according to "majority norms", already from birth on. Consequently, they are most likely to match white heterosexuals in average productivity.

If anything, statistical discrimination should work in favor of the lesbian! Lesbians are not only better equipped in observables, the fact that they earn more on average reflects that they are also doing better in the unobservables. Therefore, lesbians seem to be harder and more productive workers than heterosexual women on average, and we should expect preferential treatment due to positive statistical discrimination. This would only reduce the amount of discrimination we observe, and Beckerian discrimination, in fact, is underestimated.

[11] Bem (1974) specifies the following characteristics as commonly being perceived as "typically male": acts as a leader, aggressive, ambitious, analytical, assertive, athletic, competitive, defends own beliefs, dominant, forceful, has leadership abilities, independent, individualistic, makes decisions easily, masculine, self-reliant, self-sufficient, strong personality, willing to take a stand, willing to take a risk.

[12] Other examples for characteristics, which are unobservable and employers might have preferences for, are religion or national origin (Badgett, 1995).

When controlling for productive characteristics and gender identity - which might differ for gay/lesbian and heterosexual individuals and cause differences in productivity - most unfavorable treatment can be assigned to a distaste of working with gays and lesbians because of a disapproval of their sexual orientation. Following Becker's (1957) taste for discrimination model, entrepreneurs might have a preference to work with heterosexual employees, and if they maximize utility and not profits, they are prepared to hire them, even if they are of lower productivity or have higher reservation wages. Similarly, coworkers' dislikes to working with gays and lesbians might lead to unfavorable treatment. Various surveys indicate that such a dislike against gay and lesbian workers in fact does exist. Black et al. (2001, p. 10) report that "in the GSS data 83% of men and 80% of women responded that same-sex sexual relations are 'always wrong' or 'usually wrong'." Klawitter and Flatt give an overview of numerous opinion polls and find that around 20% of Americans do not favor equal job opportunities for gays and lesbians. Nevertheless, the support for equal job opportunities has increased from less than 60% in the late 1970s to around 80% in the 1990s.

Method

Correspondence Testing has been widely used to measure race (e.g. Newman, 1980; Firth, 1981; Riach/Rich, 1991) and sex discrimination (Firth, 1982; Riach/Rich, 1995). Adam (1981) used a similar technique for testing discrimination based on sexual orientation. While very interesting in extending the research to a previously neglected area of discrimination, his study has more the touch of a pilot study with its rather small sample and lack of statistical information.

The principle of Correspondence Testing is to compare the labor market outcomes of applicants who are identical in all their productive characteristics but differ in one demographic variable. The necessary data is gained by sending out matched letters of applications to the same job openings. If a firm invites one applicant but not another, then this can be attributed to discrimination.[13]

[13] Obviously testing whether somebody gets invited for an interview captures differential treatment at the initial stage of hiring only, while some employers might delay their "discriminatory activity" until later. Still, the possibility of receiving a job offer is conditional on being invited to an interview, which means that differential treatment in hiring has to be equal or larger to what is measured by Correspondence Testing (Riach/Rich, 1995). Researchers at the Urban Institute (e.g. Kenney/Wissoker, 1994) have extended this method to the next stage of the hiring process. In their "Audit Studies" they have not only sent out written applications but also matched pairs of real applicants of different ethnic groups who actually met employers for an interview. This allows the observing of discrimination in actual job-offers, although it suffers from the disadvantage that real-life applicants who meet all the required criteria are hard to find. Furthermore, it is impossible to control for differences in real-

Usually conducted in America, Australia or Great Britain, previous studies using Correspondence Testing suffer from the general drawback that only very short résumés are common in these countries, a fact which possibly does not allow controlling for all relevant variables. Consequently, the possibility of mere statistical discrimination cannot be ruled out (see Heckman, 1998).[14] The Austrian labor market, on the other hand, has the advantage that this problem can be avoided without raising employers' suspicion.[15] In Austria, a very detailed set of documents is required to be considered a serious job applicant. Ideally, the letter of application is supplemented by a curriculum vitae, school reports, letters of reference by previous employers, and a photograph. This vast amount of information largely dismisses the possibility of mere statistical discrimination. A similarly convincing experiment could not be conducted in the US without a great risk of being detected.

To test for discrimination based on sexual orientation and identify whether gender has a mediating effect on differential treatment, a 2 x 2 experimental design has been used, varying sexuality (heterosexual/lesbian identity) and gender (femininity/masculinity) of the applicants. Consequently, application material had to be constructed for four different types: a heterosexual (straight) feminine and straight masculine woman, a feminine lesbian (“femme”), and a masculine lesbian (“butch”).[16]

Gender Types

To meet Austrian standards, the application material consisted of a letter of application, an elaborate curriculum vitae, a fake school report and a photograph. Obviously, the need to attach photographs of equally good-looking applicants made the preparation of the application material considerably more demanding, but also served as an advantage for the research question: physical looks are one of the strongest indicators for gender identity and could be used as a signal accordingly. While the masculine woman depicted in the photo had short, dark hair, broad shoulders and was wearing a business jacket, the feminine one had long, blond hair and was in elegant, flowing clothes.

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life interactions that might take place during an interview. "Audit Studies" have also been conducted to measure discrimination in housing, applying for a mortgage, negotiating the price of a car and seeking taxi services (see Fix et al., 1992 for an overview of auditing for discrimination).

[14] When testing for discrimination based on sexual orientation this is generally a less severe problem, however, since – as has been stated before – there seems to be little prejudice about gays’ and lesbians’ productivity. If there are no presumed differences in productivity, no statistical discrimination can occur.

[15] Austria has not yet adopted any anti-discrimination policies protecting gays and lesbians against unfair treatment in the labor market, in contrast to 12 states and many cities in the US and most other countries in the European Union that already have anti-discrimination laws. However, a directive by the European Union in autumn 2000 imposes the implementation of such a national law upon Austria within a time frame of three years.

[16] Detailed application materials (standard letters of application, CVs, school reports and photographs) are available from the author upon request.

Other indicators for gender identity were the following: choice of font and layout in the CV and hobbies. The layout of the feminine applicant's CV was nice and playful, the design of the masculine appeared rather plain. The feminine female's hobbies were drawing, designing and making of clothes, while the masculine enjoyed rock-climbing, canoeing, playing drums, and motorcycling.[17]

A pre-test was conducted to verify the successful representation of the two females' gender identity and to ensure that the differences of all job applicants in their self-presentation (in particular the photographs) did not cause distortions in general desirability. 119 business students were asked to evaluate one applicant each, represented by her CV and photo. There was no information on sexual orientation given for the candidates. The Bem Sex-Role Inventory (BSRI), developed by Bem (1974), is a standard measure for gender identity in psychology and provides a sufficient tool to test the dimensions "femininity", "masculinity", and "social desirability". While the feminine female achieved significantly higher scores in femininity and the masculine female in masculinity, the scores of the two candidates on social desirability were almost identical.[18]

Sexual Orientation Types

For half of the applicants no explicit information on sexual orientation was given, these were classified as heterosexuals. The lesbians were labeled by the following information about their secondary occupation: "1996 – 1998: Managerial activity for the Viennese Gay People's Alliance." To indicate that this personal engagement in the gay and lesbian movement would not conflict with job dedication, the affiliation with the Gay People's Alliance already laid in the past. [19] In contrast to many other gay and lesbian organizations around the world, the Austrian

[17] In addition, different international job experiences (au pair girl for the feminine, motorcycle tour with occasional jobs for the masculine female) were given for accountants, one of the two occupational subcategories tested. Since they were of higher age than the secretaries (matched to the average employee in the occupation), it was possible to indicate one-and-a-half years international experience for both applicants without evoking too much suspicion. See Weichselbaumer (2000) for details.

[18] Only one previous study using Correspondence Testing, Newman (1980), reported the attachment of photographs, and was severely criticized for not controlling for physical attractiveness of the applicants (see McIntyre et al., 1981). Since a number of studies have shown that beauty has an impact on labor market decisions (e.g. Biddle and Hammermesh, 1994, 1998; Averett and Korenman, 1996), it seemed important to add physical attractiveness as a separate item to the social desirability dimension provided by the BSRI. Similarly, the item "making a competent impression" was included to ensure that photographs and other variations in the CVs did not cause one applicant to look relatively more proficient than the other. For details on scores of applicants and statistical tests, see Weichselbaumer (2000).

[19] Some employers might not discriminate against lesbians per se, but only against those who *list* participation in gay and lesbian organizations on their CV's. They may perceive the lesbian applicant as a radical or as lacking business savvy, since she does not try to hide her sexual orientation more actively. However, previous professional engagement with a gay and lesbian organization clearly serves as an indicator for relevant job experience, so hiding sexual orientation means either concealing relevant human capital or lying about one's past with the risk of being detected.

Gay People's Alliance has no affinities to any political party but represents gays and lesbians of all political and religious convictions. To signal a similar amount of social awareness, this commitment to volunteer work by the lesbians was juxtaposed by matching statements for the straight applicants, varied for different gender identities. The feminine straight woman declared to volunteer for a non-profit organization assisting school children with learning disabilities and the masculine woman for a non-profit cultural center.

The different sexuality/gender types were simply created by combining the gendered CVs with the sexual orientation information.

The application letters were constructed to match the average employee in the clerical profession, i.e. accountant and secretary.[20] This occupational category was chosen because the relatively high labor demand allowed sending out a sufficient number of standardized applications in response to job advertisements to gather a representative sample. Furthermore, it allowed to create convincing application material (e.g. by providing school-reports), and to submit written applications (in many occupations phone calls are required to test the verbal fluency of applicants).

To avoid detection, names of employers were avoided in the CVs and job experience was formulated in a rather general way. All accountants and secretaries had identical human capital and obtained their education in exactly the same school-type, only at different locations. The school marks in the attached school reports were identical for all applicants in those subjects of primary relevance for the jobs under investigation and equal on average in subjects of lower interest. The photograph was attached in the form of a (digitally manipulated) image color-printed on the CV, which is a common cost-saving practice used by Austrian job-applicants.

Sending out the applications

While it is not an absolute necessity to send all the different applications to each firm, it serves the advantage of controlling for firm-specific variables.[21] Besides that it allows to collect data more quickly.

[20] Both of these jobs are female-dominated ones: 77 % of all accountants and 97 % of all secretaries are women. The average income of women in both occupations is 1000 EURO according to the Micro Census 1997; the average overall female income is 900 EURO (male: 1300 EURO). Weichselbaumer (2000) has tested the effect of sex and gender conformity of heterosexual applicants not only for female- but also for male-dominated occupations and found discrimination by sex but not by gender.

[21] Adam (1981) sent only one résumé to each firm, which does not control for firm specific effects, but allows using completely identical letters of application instead of creating matching ones, since there is no danger of detection.

In principle, the most straightforward experiment to test for discrimination based on sexual orientation would be to send applications of all four different applicants, the feminine straight (FS), the masculine straight (MS), the feminine lesbian (FL) and the masculine lesbian (ML), to the same vacancies and compare the invitation rates. Evaluating the success rates for an identical woman who one time indicates she is a lesbian, and the other time doesn't (see arrows 1. in Table 1), would allow to measure the effect of sexual orientation. At the same time, a comparison of the feminine and masculine female of one particular sexual orientation could be used to calculate the effect of gender (see arrows 2. in Table 1). However, the actual research setup faces a special problem: two identical applications of a single individual - one time labeled as lesbian, the other time not - cannot be sent to the same firm. They would be immediately identified as representing one single person instead of being evaluated independently. Particularly the photograph leads to an instantaneous recognition of the identical applicant. Similarly, it is not possible to send the applications of the two lesbians to one firm. Employers would certainly detect the "coincidence" of two applicants declaring themselves as lesbians at the same time! Consequently, we had to choose a more indirect route to gain the desired data. First, we collected data comparing the two heterosexual women (2.a), then we submitted applications by one heterosexual and one lesbian with differing gender identity to each firm under investigation (arrows 3.a and 3.b). This avoided the problem of detection, but still allowed to control for firm-specific variables.

To sum up, three different samples were collected: first, applications of two straight women were sent to each firm; second, a straight feminine female and a masculine lesbian applied for each job, and finally, the invitation rates for a feminine lesbian and a straight masculine female were collected. Given the detailed information about the identical human capital of applicants, it was necessary to always send two sufficiently different looking applications to each firm.

The Saturday issue of the Austrian newspaper „Kurier" was examined weekly for relevant job advertisements, as it provides the largest amount of job announcements from the biggest Austrian labor market, the Greater Vienna area.

The experiment was conducted in three different steps: from early to late 1998 all the firms searching for accountants or secretaries were contacted by the two straight women. In the next step, from late 1998 to mid-1999, applications of the feminine straight, and masculine lesbian women were sent to all vacancies. Finally, from mid-1999 to early 2000, the feminine

lesbian and masculine straight woman applied to all announced vacancies. In total, 1226 applications were sent out in response to 613 job openings.

If an entrepreneur was interested in one of the applicants, she could be contacted either through a Viennese address, or by leaving a message on her answering machine. When one of the applicants was invited to an interview, the proposed appointment was canceled to avoid any inconveniences on the firm's side.

4 Results

Discrimination against masculine woman

Table 2 shows the invitation rates of the different applicants. Table 2a illustrates the effect of sexual orientation on the masculine woman. First, the pair of straight females with different gender identity applied to each relevant job opening. The feminine woman was invited by 43.38 % of all contacted firms, the masculine one by 42.65%, which means that the feminine female was more successful by 0.74%. The null hypothesis, that the two women were treated the same, could not be rejected. Second, applications of the feminine straight female and the masculine lesbian were sent out to all firms. The feminine straight applicant was successful in 60.82% of all cases, the masculine lesbian in 47.95%.[22] This represents an advantage of the feminine straight female of 12.87%. Remember that this difference occurs, although both individuals apply to the same firms, i.e. firm specific effects are controlled for. What is of central interest, though, is the comparison between the masculine straight and lesbian female, which can only be obtained via the difference in differences: The advantage of the feminine straight woman over the masculine woman increases from 0.74% to 12.87%, when the latter indicates lesbian orientation. This indicates an advantage of the straight masculine female over her lesbian counterpart of 12.13%[23] and means that 12.13% of all contacted firms abstain from inviting the masculine female to an interview when she reveals a lesbian orientation.[24]

[22] The high overall rates of invitations in the second round are rather striking and must be due to seasonal changes. Other exogenous changes of labor demand or other macroeconomic variables are possible but unlikely within this short time period, since there were no observable changes in the business cycle.

[23] Investigating discrimination for the two occupational subcategories separately, we find significant discrimination against the masculine lesbian only for secretaries. This might be due to the fact that normative heterosexuality is more of an inherent requirement for secretaries while accountants often work autonomously and have even less contact with clients and customers.

[24] The negative effect of discrimination is significant at the 5 % level using a one-sided test.

Discrimination against feminine woman

Table 2b demonstrates the effect of sexual orientation on the feminine female. As has been noted before, the straight feminine female has an advantage over her masculine counterpart of 0.74%. In the next step, the masculine straight female and the feminine lesbian applied for the same jobs. The masculine straight woman was invited to an interview by 48.82% of all contacted firms, the feminine lesbian by 36.47%. Consequently, the masculine straight woman had an advantage compared to the feminine lesbian of 12.35%. Calculating the DD, we see that the declaration of her sexual preference decreases the feminine female's chances to be invited for an interview by 13.09%[25].

The underlying assumption of the DD experiment is that while the absolute values of invitation rates for the straight applicants can be different in each stage, e.g. due to the business-cycle or – as is more likely in our experiment – seasonal changes, the differences in invitation rates must be invariant over the different stages of the experiment.

Comparing the effects for different genders

When indicating a lesbian orientation, the invitation rate of the feminine female decreases by a higher amount (13.09%) than that of the masculine one (12.13%), nevertheless the difference between the two gender types is statistically insignificant (13.09 – 12.13 = 0.96).[26] Both women have an identical disadvantage when disclosing their sexual preference.

However, one could cast doubt on the assumption that the difference in invitation rates is constant over the business cycle. According to Becker (1957), discrimination is much less likely to occur in tight labor markets when invitation rates are high, because only then entrepreneurs forego profits. The overall invitation rates were substantially higher when testing the effect of sexual orientation for the masculine women (2nd round) than for the feminine ones (3rd round), which indicates that labor was more scarce in the 2nd round. As a result, discrimination should diminish. Nevertheless, the masculine lesbian faced the same amount of discrimination as her feminine counterpart who applied for jobs in a period with less labor demand. This leaves room to suspect that the masculine lesbian would, in fact, be treated *less favorably* than the feminine under equal labor market conditions. It has to be concluded that masculinity has not proven to be advantageous for lesbian women, while the possibility that it works as a disadvantage cannot be dismissed.

[25] Again, this effect is significantly different from zero at the 5 % level.

5 Conclusions

In this paper we examined the impact of lesbian sexual orientation and gender identity on the chances of getting invited to a job interview. Previous research investigating discrimination based on sexual orientation has provided ambiguous results for lesbians' earnings, usually indicating higher incomes for lesbians. However, this advantage for lesbian workers could be due to a number of different reasons, e.g. selection bias (only high income lesbians disclose their sexual orientation), insufficient controls for occupations, or unobserved differences in productive characteristics. Furthermore, since the available GSS and PUMS data does not provide information on disclosure on the job, a large number of investigated individuals might not be "out" on the job and therefore not confronted with an income loss - although discrimination based on sexual orientation does occur to those "outed" to the public.

Our experiment allowed to collect data free of any of the previously mentioned flaws, comparing the labor market outcomes for *open* lesbians and heterosexual women of *identical productivity* in the clerical profession in Austria. Additionally, we tested whether increased masculinity is responsible for lesbians' higher earnings as suggested by Blandford (2000) and Clain and Leppel (2001).

We find that indicating a lesbian identity reduces one's invitation rate by about 12 – 13%, which corresponds with Adam's (1980) results, who finds a 11% reduction of invitation rates for females in the city of Toronto. Since the experimental setup controlled for productivity, it has to be discrimination which is responsible for this unfavorable treatment of lesbians. Customers' discrimination is an unlikely source for differential treatment since the investigated jobs do not require much customer contact. However, coworkers' discrimination as well as employer's discrimination can be responsible for this outcome. While the bosses of most positions we applied to probably were male, the jobs under investigation were clearly female-dominated and suggest predominantly female coworkers. However, Kite and Whitley (1996) showed in their meta-study that - although men hold more negative attitudes toward gay men - men and women do not significantly differ in their negative attitudes toward lesbians. Consequently, both groups - employers and coworkers - are equally likely to cause differential treatment.

The hypothesis that gender identity might have a separate influence on labor market outcomes could not be verified. This means, at least with respect to being invited to an inter-

[26] The difference of 0.0096 lies within the confidence interval for $\alpha = 5$ %, which is [- 0.226, 0.245].

view, that increased masculinity neither works as an advantage nor as a disadvantage – neither for straight nor lesbian women.

Although wage regressions indicate higher earnings for lesbian women, the results of this study demonstrate that lesbians are, in fact, not a relatively privileged group, but - much to the contrary - are subject to discrimination. Their higher incomes may be due to measurement errors or increased productivity. This productivity might be driven by higher effort and on-the-job-training and is possible, since lesbians do carry less household responsibility, but also necessary, because they cannot receive transfers from a partner.

6 Tables

Table 1: (Im)Possible strategies for experimental investigation

Gender \ Sexual orientation	Heterosexual	Lesbian	
Feminine	Straight feminine	Feminine lesbian	Difference evoked by sexual orientation
Masculine	Straight masculine	Masculine lesbian	Difference evoked by sexual orientation
	Difference evoked by gender	Difference evoked by gender	Difference in Differences (DD)

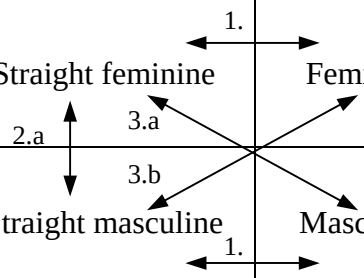

Table 2: Invitation rates for different sexuality/gender types

Table 2a: Masculine female

	Invitation rates – 1st round (arrow 2.a)		Invitation rates – 2nd round (arrow 3.a)	Difference in Differences MS - ML
N = 272		N = 171		
Feminine straight FS	43.38 %	Feminine straight FS	60.82 %	
Masculine straight MS	42.65 %	Masculine lesbian ML	47.95 %	
Difference FS - MS	0.74 %	Difference FS - ML	12.87 %	
				- 12.13 %

Table 2b: Feminine female

	Invitation rates – 1st round (arrow 2.a)		Invitation rates – 3rd round (arrow 3.b)	Difference in Differences FS - FL
N = 272		N = 170		
Masculine straight MS	42.65 %	Masculine straight MS	48.82 %	
Feminine straight FS	43.38 %	Feminine lesbian FL	36.47 %	
Difference MS - FS	- 0.74 %	Difference MS - FL	12.35 %	
				- 13.09 %

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