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# Lesbians and Bisexual Women in the Eyes of Scientific Psychology 


#### Abstract

Social science research has contributed to the destigmatization of homosexuality which, in turn, has affected the topics researchers choose to study. We examined psychological research that focused on lesbians and bisexual women from 1975 to 2001 to determine if the frequency and content of this research reflect the increasingly positive view of sexual minorities in society. The results indicate that non-heterosexual people were included in less than 1 percent of published research, and lesbians and bisexual women were significantly less likely to be studied than gay and bisexual men. Content analysis of 533 abstracts followed by cluster analysis of 520 abstracts revealed four conceptual frameworks that characterized this body of research: Gender Identity, Attitudes towards Lesbians, Lesbians as Problems, and Life in Heterosexist Society. Together, changes over time in the quantity and emphasis of research shed light on how lesbianism and bisexuality have been constructed in psychological studies and highlight the politics of lesbian-bisexual visibility.


Key Words: attitudes toward sexualities, cluster analysis, gender bias in research, research critique, social construction

Psychology, as a discipline and a social practice, is influenced by social and political environments. For example, research on women and gender burgeoned with the advent of the second wave of the women's movement in the late 1960s, and attention was directed to previously neglected topics such as violence against women (Marecek et al., 2003). The emergence of new research topics indicated a change in researchers' conceptualization of women. Because research topics reflect how researchers conceptualize target populations, it is important to delineate the topics researchers choose to study, especially on populations to which a major change of public opinion has occurred. In this study, we examine researchers' conceptualizations of lesbians and bisexual women (LB) over time
because the political environment for these groups has shifted toward more social acceptance.

Influences on the psychology of women and gender from the social and political Zeitgeist are illustrated in Crawford and Marecek's (1989) analysis of four frameworks that replaced a prefeminist 'womanless' psychology: Exceptional Women, Women as Problem, Psychology of Gender, and Transformation. In proposing that psychological research on women and gender could be characterized in terms of competing epistemological frameworks, Crawford and Marecek encouraged feminist psychologists to adopt a self-reflexive stance on their discipline. We suggest that such self-reflexivity is particularly pertinent at this stage in the development of a gay and lesbian psychology. Lesbians and bisexual women are socially positioned by both sexuality and gender. For a time, psychological research and theory reflected a psychopathological view of homosexuality by focusing predominantly on its causes, assessment, and negative effects (Kitzinger, 2001; Morin, 1977). However, the larger political and social environments were starting to change by the 1970s. Pioneer researchers' findings, such as Hooker's (1958) studies of gay men, and activists' efforts for gay rights challenged the pathological view of homosexuality and resulted in the American Psychiatric Association's exclusion of homosexuality as a mental disorder (Buhrke et al., 1992; Morin and Rothblum, 1991). Soon after, the American Psychological Association (1975) stated that sexual orientation per se caused no impairment in general social or vocational capabilities.

It might be expected that the changing social climate of the 1970s, and particularly the removal of homosexuality from the Diagnostic and Statistical Manual of Mental Disorders (DSM), would affect the kind and amount of psychological research on minority sexualities (Morin and Rothblum, 1991). Indeed, previous reviews have found a decline in the psychopathological view of homosexuality. Examining heterosexual bias in journal articles from 1967 to 1974 (Morin, 1977), from 1979 to 1983 (Watters, 1986), and from 1978 to 1989 (Buhrke et al., 1992), researchers found a decreasing number of studies on 'causes' of homosexuality. After reviewing 139 studies, Morin developed five categories to describe the topics in research on homosexuality: assessment (16\%), causes (29\%), adjustment ( $27 \%$ ), special topics ( $20 \%$ ), and attitudes toward homosexuality ( $8 \%$ ). Using a revised version of Morin's taxonomy, Watters later concluded that by the mid-1980s more and more studies focused on special topics ( $56 \%$ ) and attitudes toward homosexuality ( $19 \%$ ), whereas studies on the assessment of homosexuality had dropped dramatically to 1 percent, and studies on causes (15\%) and adjustment (9\%) had also decreased.

These three literature reviews documented the number and general topics of psychological research on minority sexualities from the mid-1970s to about 1990. However, from a feminist perspective, these reviews have some major limitations. First, their conclusions were more representative of gay men because, in the included studies, gay men outnumbered lesbians and bisexual men and women as participants. Nevertheless, reviewers drew conclusions about non-heterosexual
samples as a whole. For example, Morin (1977) developed a taxonomy without referring to the target's sex, although the ratio of gay male versus lesbian participants in his included studies was $4: 1$. The ratio of gay men to lesbians was $2: 1$ or 3:1 in Watters' (1986) review, a ratio that he mentioned but did not deal with. Although Buhrke et al. (1992) reported that the percentages of gay men's issues versus lesbian issues were similar in their study, and that most studies focused on both, they did not specify what constituted lesbian issues, gay men's issues, or both. Perhaps the most important limitation of earlier reviews is that they catalog, but do not critique, research on lesbian, gay, and bisexual (LGB) samples. In other words, the self-reflexivity of feminist perspectives is missing. The most recent reviews of research on LGB samples were quite limited as to topic and time period (Crisp, 2002; Mustanski et al., 2002).

Feminist theorists have pointed out that not only are diverse sexualities excluded from psychology, but heterosexuality also remains an unremarked and under-theorized norm for interpreting human experience (Brown, 1989; Kitzinger, 2001; Wilkinson and Kitzinger, 1993). These practices parallel the pre-feminist psychology that excluded women, and the exceptional women framework that incorporated (a few) women but left males as the normative category (Crawford and Marecek, 1989). Peplau and Garnets (2000) argued for a separate examination of male sexuality and female sexuality because multiple pathways to sexual orientation outcomes have been observed. Blackwood (2000) showed how sexuality is socially constructed based on a cultural anthropological perspective. These new approaches, along with past views on homosexuality, present several interesting questions. Since homosexuality was officially destigmatized, has psychology produced a research literature that addresses the intersection of gender and sexualities? If so, what kinds of topics have been studied with lesbians and bisexual women? Has it produced research that has transformative potential with respect to LGB sexualities?

Crawford and Marecek described transformational research on women and gender as characterized by 'the addition of sophisticated nonexperimental methods, recognition of the perspectives and personal involvement of both the investigator and the participants, and attention to and incorporation of social/ political aspects of the work' (1989, p. 161). Interestingly, the sole example they provided was Kitzinger's (1986) study of lesbians' accounts of their lesbianism. Brown (1989) articulated a vision of a transformative paradigm for psychology based on the experiences of lesbians and gay men. She proposed that the gay and lesbian experiences of biculturalism, marginality, and normative creativity could, if fully incorporated into research and theory, alter psychology's dominant theories of the self and relationships, its methods of inquiry, and its epistemological assumptions.

In this article, we offer a critical analysis of research on LB sexualities by examining four research questions. First, by comparing the number of journal articles that indexed gay men, lesbians, and bisexual men and women with those on all populations, we examined whether LGB people have been consistently
neglected in psychological literature in the years from 1975 to 2001. Moreover, we compared the amount of published research within the non-heterosexual groups to see if gay men, lesbians, and bisexual men and women received similar attention in scientific psychology. Thus, our first two questions are concerned with measures of the proportion of all psychological research that indexes LGB people, and LB women in particular. Thirdly, we looked at where research on LB sexualities was published, as an index of its penetration of the field as a whole. Fourth, we content analysed abstracts of journal articles and subjected the results to cluster analysis to investigate how researchers constructed lesbianism and bisexuality in their studies. Together, these methods allowed us to examine the inclusion of LB women as the focus of research, to document changes over time, and to theorize about the interpretive frameworks for conceptualizing women's LB sexualities within contemporary scientific psychology.

## STUDY 1

Study 1 was designed to show whether lesbians and bisexual women were underrepresented in psychological research as females and as non-heterosexual people. In this study, the number of publications on LGB populations was compared with the total number of publications in the PsycInfo database during the same period of time.

## Sample of Research

Computer-based information searches were conducted on PsycInfo (records from 1975 to August 2003) to document the quantity of research. The inclusion criterion for general publications was that the article was documented in the database between the years of 1975 and 2001. Sub-categories of articles were generated on gay men, lesbians, bisexual men and bisexual women by using different sets of keywords in the search. For research on gay men, homosex* (with men, man, or male specified) and gay* were used. For research on lesbians, homosex* (with women, woman, or female specified) and lesb* were used. For research on bisexual people, bisex* was used. For bisexual men, male was specified whereas, for bisexual women, female was specified.

## Results

Despite increase over the years, very little research was conducted on LGBs, compared to research on other populations. Research on lesbians and gay men constituted less than 1 percent of the research over the entire 27 -year period we studied (see Figure 1). ${ }^{1}$ Research on bisexual people was even more rare, less than 0.20 percent of the research. The majority of research on bisexual men or women also included gay men or lesbians. Most recently (1999-2001), for

FIGURE 1
Research Indexing Gay Men, Lesbians, Bisexual Men and Women Compared with all PsycInfo Research


Publication Year
example, nearly 98 percent of research on bisexual men or women included other samples. Thus, researchers rarely studied bisexual men or women as a unique sample, and the tendency not to do so grew stronger in recent years. Examining research across years, there was an increase in research on gay men only ( $r=.70$, $p<.001$ ) and research on lesbians only ( $r=.57, p<.001$ ); the amount of research on bisexual men only ( $r=.13, p>.51$ ) or bisexual women only ( $\mathrm{r}=.17, \mathrm{p}>.38$ ) remained consistently low. ${ }^{2}$

Although these data show that lesbians, gay men, and bisexual men and women are rarely targeted populations in psychological research, the exclusion is not similar across the four populations. Using chi-square tests, we compared the number of research records on lesbians versus on gay men and the number of research records on bisexual women versus on bisexual men. The comparisons showed that lesbians and bisexual women were significantly less likely to be studied, $\chi^{2}(8)=522.72, \mathrm{p}<.001$ and $\chi^{2}(8)=231.30, \mathrm{p}<.001$, than gay men and bisexual men.

In summary, gay men were more likely to be studied than lesbians, and bisexual men more likely than bisexual women. This suggests either that male remains a normative category even when it is coupled with a minority sexuality category, or that gay men and bisexual men outnumber lesbians and bisexual women in actual numbers. To learn more about the way researchers studied
lesbians and bisexual women, we turned to Study 2 to examine more interpretive measures.

## STUDY 2

Study 2 was conducted to examine topic shifts on research about LB women over time and to theorize about the interpretive frameworks for conceptualizing women's LB sexualities within contemporary scientific psychology. To do so, abstracts of studies on LB women-related issues were selected, content coded, and quantitatively analysed.

## Sample of Studies

Computer-based information searches were conducted on PsycInfo (records from 1975 to April 2003). Inclusion criteria for content analysis were that the study (1) was published in a journal between 1975 and 2001; (2) was written in English; (3) was empirical; (4) included at least one sample from the USA; and (5) included at least one sample of lesbians or bisexual women. However, abstracts were excluded from content analysis if (1) the authors offered implications for LGB people from their results, but did not study LGB people; and (2) the study included 'homosexuals' but did not specify participant sex. The search yielded 533 abstracts, published in 201 journals. ${ }^{3}$

## Content Coding

Each abstract was content coded on the following information: (1) date of publication; (2) source of publication; and (3) target population. In order to examine how researchers constructed lesbianism and bisexuality, three content coders analysed the abstracts using a list of topics revised from that of Morin (1977) and Watters (1986). In addition to the five major topics (causes, assessment, adjustment, attitudes toward homosexuality, and special topics) used by Morin and Watters, new major categories are as follows: personality or personal characteristics including self-esteem, self-concept or self-definition, stigma, and discrimination. ${ }^{4}$ Each abstract was assigned codes to all categories that were applicable; codes were not mutually exclusive. Most of the abstracts ( $97.6 \%$ ) were coded by two of the three coders. Their agreement ranged from 79.4 percent to 100 percent with an average of 96.3 percent for each category. The agreement of the three coders for 9.4 percent of the total abstracts ranged from 86.3 percent to 100 percent with an average of 96.3 percent. Disagreements among the coders were resolved by discussion.

## Analysis Strategy for Content Coded Data

Due to the large number of abstracts, we opted for using a cluster analysis on the data derived from content analysis. We considered it important to include all abstracts of studies on a full range of topics because there have been several reviews (e.g. Crisp, 2002) examining a more limited set of studies. The inclusion of research published in 1975-2001 also allowed us to examine trends across time. After assigning content categories to each abstract, we used cluster analysis to group abstracts based on those categories. Cluster analysis creates conceptual clusters so that abstracts within a cluster would exhibit a relatively uniform pattern of content categories compared to abstracts in other clusters (Hair et al., 1998). For example, an abstract of a study investigating gender identity and coming out may be clustered with one examining how gender identity affects the decision to come out and stress involved with that decision, whereas a study of how lesbian couples raise their children would be separated from that cluster. Furthermore, cluster analysis reveals the structure of clusters and their relationship to each other, allowing us to interpret both the meaning of individual clusters and their conceptual links to each other.

To apply cluster analysis, we first used non-hierarchical cluster procedures to detect outliers. We then used hierarchical cluster procedures to classify the rest of the abstracts, using two criteria to decide how many clusters would be derived. First, we used the increase of agglomeration coefficient, an indicator of the increase of within-cluster heterogeneity when two clusters were combined. Also, we inspected the dendrogram, a tree graph of how the clusters are combined at each step of the procedure, to adjust the number of clusters derived (Hair et al., 1998). ${ }^{5}$ We then interpreted each cluster by the content coding categories that significantly differentiated it. To choose the defining content coding categories, we used chi-square analyses to select the categories with significant results across different clusters.

We also examined whether the clusters of abstracts differed on publication year, coders, and target populations. Because it was possible that research focused on different issues across years and researchers might target different populations depending on the research questions, we expected that the clusters of abstracts would differ on the publication year and the target populations. However, the clusters should not differ based on who coded the abstracts.

## Results

Study Characteristics as Represented by their Abstracts. The characteristics of this sample of studies are summarized in Tables 1 and 2. About three-quarters of these studies ( $75.8 \%$ ) were published after 1996, a partly artifactual finding. As shown in Table 1, studies were more likely to be published in specialized journals, such as Journal of Homosexuality or Journal of Lesbian Studies. Of these journals, all but four are specifically focused on either gender or sexuality. In particular, journals published by Haworth Press accounted for nearly one-fifth of

TABLE 1
Top Ten Journals for Studies about Lesbians or Bisexual Women, 1975-2001

| Journals | Publisher | $\begin{aligned} & \text { Impact } \\ & \text { Scores } \\ & \text { (2004) } \end{aligned}$ | Abstracts Included in the Content Analysis (\%) |
| :---: | :---: | :---: | :---: |
| Journal of Homosexuality (1974) | Haworth | 0.24 | 51 (9.57) |
| Journal of Lesbian Studies (1997) | Haworth |  | 17 (3.19) |
| Women and Therapy (1981) | Haworth | 0.15 | 17 (3.19) |
| Psychological Reports (1955) | Ammons Scientific | 0.34 | 16 (3.00) |
| Archives of Sexual Behavior (1971) | Springer/Plenum | 2.29 | 13 (2.44) |
| Journal of Gay and Lesbian Social |  |  |  |
| Services (1994) | Haworth | - | 11 (2.06) |
| Journal of College Student |  |  |  |
| Development (1959) | Johns Hopkins | 0.76 | 10 (1.88) |
| Journal of Gay and Lesbian |  |  |  |
| Psychotherapy (1989) | Haworth | - | 10 (1.88) |
| Psychology of Women Quarterly (1976) | Blackwell | 1.01 | 10 (1.88) |
| American Journal of Public Health (1911) | American Public |  |  |
|  | Health Association | 3.24 | 10 (1.88) |

Note: Year each journal began publication is shown in parentheses. Percentages of all abstracts, $N=533$.

TABLE 2
Characteristics of Abstracts on Lesbians and Bisexual Women in the Sample

| Population(s) Sampled | Frequency | $\%$ |
| :--- | ---: | ---: |
| Lesbians only | 99 | 18.6 |
| Lesbians and |  |  |
| Heterosexual Women | 58 | 10.9 |
| Gay Men and Bisexual Men and Women | 49 | 9.2 |
| Gay Men | 37 | 6.9 |
| Gay Men and Heterosexual Men and Women | 24 | 5.6 |
| Bisexual Women and Heterosexual Women | 22 | 4.5 |
| Bisexual Women | 17 | 3.2 |
| Heterosexual Men and Women, Gay, and Bisexual Men and Women | 6 | 1.1 |
| Bisexual Women only | 3 | 0.6 |
| Bisexual Women and | 3 | 0.6 |
| Bisexual Men | 1 | 0.2 |
| Heterosexual Women | 184 | 34.5 |
| Heterosexual Men and Women | 533 | 100 |
| General populations or sexual orientation unspecified |  |  |
| Total |  |  |

all the included research. The journals in Table 1 together accounted for 31.0 percent of all research indexing LB women. No other indexed journal published more than 1.7 percent of the research included in this study. For the journals indexed in Journal of Citation Report, there was no trend for publications on LB women to appear in journals with higher impact scores over time, $r(\mathrm{~N}=378)=$ $.05, p=.29$.

As for target populations, about one-third of the studies were focused on general populations or participants whose sexual orientation was unspecified. A quarter of the studies targeted lesbians or lesbians and heterosexual women. Although bisexual women samples were included in about a quarter of the studies, they were more likely than were lesbians to be studied with other groups of different sexual orientations, 89.8 percent and 70.5 percent respectively (Table 2).

Cluster Analysis. In the cluster analysis, we included abstracts that targeted both lesbians and bisexual women and examined the difference between those abstracts with and without bisexual women samples. The 13 abstracts that included bisexual females either alone or with heterosexual people or gay men were excluded from the following analysis due to their small number. In addition to outlier abstracts detected from the preceding non-hierarchical cluster analysis, nine clusters were derived from the hierarchical cluster analysis. The clusters did not differ based on who coded the articles $(p=.20)$. The clusters differed on publication year and target population, $F_{(9,510)}=2.5, p<.01$ and $\chi_{(72, N=520)}=$ $224.80, p<.001$, respectively. Comparing lesbian samples in clusters, we found a difference on the inclusion and exclusion of bisexual women samples among the clusters, $\chi^{2}{ }_{(9, N=336)}=46.33, p<.001$ (Table 3). These differences were consistent with our predictions that clusters would differ on the publication years and on the target populations.

Interpretation of Clusters. The topic list discussed earlier provided the content categories entered into the cluster analysis. We labeled the nine derived clusters: Gender Identity, Others' Attitudes, Sex/STD [sexually transmitted disease], Mental Health, Therapeutic Issues, Parental Issues, Work Environment, Violence, and Alcohol and Drug Use. The six outlier abstracts identified in the non-hierarchical cluster analysis seemed to form a separate group that we labeled Aging and Social Support (see details in Table 3 and Figure 2).

The Gender Identity cluster ( 144 abstracts, $27.7 \%$ of total abstracts) emerged early (in 1979) and examined the relationships among gender typing, gender role attitudes, sexual orientation, and conventional femininity; 79 percent of all abstracts on body build and beauty, and 76 percent on gender identity, fell into this cluster, as did 57 percent of all abstracts of aging. Samples included primarily lesbians and heterosexual women ( $46 \%$ of all abstracts on the same sexual orientation of the samples), followed by lesbians and bisexual women (45\%), and lesbians alone ( $32 \%$ ). Moreover, ideologies ( $75 \%$ ) such as feminisms, as well as more broadly defined value systems ( $57 \%$ ), were examined in this cluster.
TABLE 3
Populations and Range of Publication Years among the Clusters

|  | Gender Identity | Others' <br> Attitudes | Sex/STD | Mental Health | Therapeutic Issues | Parental Issues | Work Environment | Violence | Alcohol Drug Use | Outlier Cluster |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total N | 144 | 70 | 61 | 52 | 45 | 43 | 43 | 29 | 27 | 6 |
| Beginning Year | 1979- | 1977- | 1984- | 1992- | 1986- | 1981- | 1987- | 1986- | 1991- | 1996- |
| 1975-83 | $55.6 \%{ }^{\text {a }}$ | 11.1\% | 0 | 0 | 0 | 33.3\% | 0 | 0 | 0 | 0 |
| 1984-92 | 34.1\% | 9.8\% | 14.6\% | 2.4\% | 9.8\% | 14.6\% | 2.4\% | 9.8\% | 2.4\% | 0 |
| 1993-2001 | 26.6\% | 13.8\% | 11.7\% | 10.9\% | 8.7\% | 7.2\% | 8.9\% | 5.3\% | 5.5\% | 1.3 |
| With Bisexual Women | 25 | 4 | $23^{\text {b }}$ | 21 | 8 | $2^{\text {c }}$ | 12 | $3{ }^{\text {c }}$ | 13 | 1 |
| Without Bisexual Women | 79 | 10 | 14 | 20 | 23 | 22 | 19 | 24 | 8 | 5 |
| Heterosexual Samples | 40 | 56 | 24 | 11 | 14 | 19 | 12 | 2 | 6 | 0 |

Note: ${ }^{\text {a }}$ percentage of all abstracts during that period of time. ${ }^{\text {b }}$ bisexual women were more likely to be included in a cluster than expected $(p<.05) .^{\mathrm{c}}$ bisexual women were less likely to be included in a cluster than expected ( $p<.05$ ).

FIGURE 2
Change over Time in Emphasis of Research on Lesbianism - Seven Largest Clusters


The Others' Attitudes cluster (70 abstracts, $13.5 \%$ of total abstracts) emerged early in 1977 and was comprised of methods of attitude change, others' attitudes toward lesbians, and stigma, as well as minority characteristics and other demographic information. Over 85 percent of all abstracts on methods of attitude change fell into this cluster, as did 66 percent of all abstracts on others' attitudes. Abstracts within this cluster were more likely to target heterosexual people or people whose sexual orientations were unknown (30\%).

The Sex/STD cluster ( 61 abstracts, $11.7 \%$ of total abstracts) was more likely than other clusters to include variables of sexual behavior, STD/HIV, and lesbian identity. When comparing abstracts that included bisexual women or not, we found abstracts in this cluster were more likely to include bisexual women samples ( $p<.05$ ). Eighty percent of all abstracts on sexual behavior fell into this cluster, as did 79 percent of STD/HIV abstracts and 30 percent of lesbian identity abstracts.

The Mental Health cluster ( 52 abstracts, $10 \%$ of total abstracts) examined research questions about suicidal ideas, attempts or risk (78\%), self-esteem (63\%), social support (58\%), health issues (55\%), emotion (35\%), and stress (33\%). Topics included in this cluster were recently studied (in 1992). Abstracts within this cluster were more likely to target LGB samples ( $33 \%$ ).

The Therapeutic Issues cluster ( 45 abstracts, $8.7 \%$ of all abstracts) was comprised of professionals' attitudes ( $89 \%$ ), seeking therapeutic help ( $71 \%$ ), and aspects of therapy and health workshops ( $58 \%$ ). Abstracts within this cluster tended to use only lesbian samples ( $12 \%$ ) as their participants.

In the Parental Issues cluster (43 abstracts, $8.3 \%$ of all abstracts), common research questions included the impact of the legal system ( $100 \%$ ), children ( $90 \%$ ), parental attitudes and experience ( $79 \%$ ), and role identification ( $47 \%$ ). Abstracts within this cluster tended to use lesbians (14\%) and heterosexual people or people whose sexual orientations were unknown (10\%) as participants. They were less likely to include bisexual women in the samples ( $p<.01$ ).

The Work Environment cluster ( 43 abstracts, $8.3 \%$ of all abstracts) was comprised of work environment (78\%) and interpersonal relationships ( $47 \%$ ). Abstracts within this cluster tended to use gay men and lesbians (19\%) and gay men, lesbians, and bisexual men and women (16\%) as participants.

The Violence cluster ( 29 abstracts, $5.6 \%$ of all abstracts) examined research questions about violence (74\%) and intimate relationships (46\%). Heterosexual men and women, gay men, and lesbians (20\%) and lesbian (10\%) samples were more likely to be included as participants, whereas bisexual women were less likely to be included in the sample.

The Alcohol and Drug Use cluster (27 abstracts, $5.2 \%$ of total abstracts) was comprised of alcohol or drug use (52\%). Topics included in this cluster were recently studied, starting in 1991. Abstracts within this cluster were more likely to use heterosexual men and women, gay men, lesbians, and bisexual men and women ( $24 \%$ ), and lesbians, bisexual women, and heterosexual women ( $17 \%$ ) as participants.

## GENERAL DISCUSSION

How are people of diverse sexualities, and particularly lesbians and bisexual women, represented in scientific psychology? Looking first at the quantity of research, there is plenty of evidence in our study to satisfy both those who wish to believe that the glass is half empty and those who wish to believe it is half full. A pessimist might stress the data revealing that, overall, research indexing LGB topics represents less than 1 percent of all psychological research documented in the PsycInfo database over the past quarter century. An optimist might stress that such research is increasing over time, and that the actual numbers of studies, if not the percentage of all studies, represent considerable research.

From a feminist perspective, pessimism seems the more justified stance. Lesbians and bisexual women were indexed less than gay men, and the only category of research that did not increase over time was studies with bisexual samples. Studies of bisexual women alone were extremely rare across the entire time period we studied.

Moreover, research on LB women was highly likely to be published in journals specializing in gender and/or sexuality. These journals have relatively small readerships and limited citation impact. None of the top 10 journals for LB research were among those published by the American Psychological Society or the American Psychological Association. Moreover, there was no tendency for

LB research to appear in higher citation-impact journals over time. These findings suggest that LB research is still marginalized; LB women are still considered 'special populations' and research with or about them is likely to have a limited impact on psychology as a whole.

It is notable that four of the top ten journals for publishing LB research are from a single publisher, Haworth Press, which publishes over 200 journals in the social sciences, humanities, and natural sciences (see http://www. haworthpressinc.com). Fifteen Haworth journals are devoted to LGBT topics in the humanities (e.g. fiction quarterlies for lesbians and gay men) and social sciences (International Journal of Transgenderism, Journal of Bisexuality); another five are specifically devoted to women (e.g. Women and Health) and two to sexuality (e.g. American Journal of Sexuality Education). Perhaps it is the sheer number of gender- and sexuality-related journals from Haworth, or the specificity of LGBT titles, that encourages researchers to send LGBT-related work to their journals. However, little is known about how researchers decide where to send research for possible publication; like many other parts of the process of doing scientific research, this remains an under-investigated topic.

It is also possible that mainstream journals reject research on LGB populations at a higher rate than they reject research on heterosexual populations. Conducting research with non-heterosexual populations is difficult because they are stigmatized and sometimes invisible, and it may take more effort on the researcher's part to reach the populations, establish trust, and recruit reasonable sample sizes. Field studies, anonymous surveys, and interview studies may be more feasible than laboratory research because the latter requires participants to enter the researcher's domain, where their sexuality is foregrounded. Thus, by mainstream standards, LGB research may not appear to be 'high quality' research. It is also possible that more overt discrimination occurs in the publication process.

Interpreting our quantity-of-research results depends on one's view of what would constitute adequate, fair or proportional representation for lesbian and bisexual women in research. Prevalence estimates suggest that 1.4 percent to 7.5 percent of women in the USA are lesbians based on different criteria, such as self-identification, sexual attraction or sexual behavior (Institute of Medicine, 1999: 28-9). Thus, as a proportion of the population, lesbians are almost certainly under-represented. Interpreting the representation of bisexual women is more problematic. This is a fairly new population for study and the label is not fully established either in the gay community or the general population. These factors, along with difficulty in accessing the bisexual population, are likely to affect measures of prevalence as well as the amount of research on bisexual women. We believe that lesbians and bisexual women should be over-represented in psychology beyond what prevalence estimates suggest because, as long as people of minority sexuality remain stigmatized by the public, the prevalence estimates would under-estimate the actual populations. Moreover, Brown (1989) argued that a psychology based on the experiences of lesbians and gay men may provide an alternative paradigm to mainstream psychology. Thus, there is a need
for research on the normative life experiences of lesbians, gay men, and bisexual people.

Our interpretive analyses, too, offer reasons for both pessimism and optimism, and room for debate. Our results suggest that men are still conceptually and numerically over-represented in psychological research. Feminists have criticized this form of gender bias in psychological research for decades (e.g. Wallston and Grady, 1985). The proportion of studies using all-male samples has decreased since the 1970s (Gannon et al., 1992). However, the bias persists in other ways. Compared to studies with all-male samples, when researchers use an all-female sample they are more likely to state it in the title, to discuss their reasons for studying women, and to point out that their results cannot be generalized to the other gender (Ader and Johnson, 1994). Our results, like earlier reviews of LGB research, show that gender bias in the sheer amount of research extends to nonheterosexual populations. Gay or straight, men are still the norm.

On a more positive note, the topics of sexuality research have changed over time. Earlier reviews showed a decline in the psychopathological stance toward homosexuality. In the research we analysed, this trend was sustained. Moreover, the largest cluster of research on lesbians, which we labeled 'Gender Identity', focused on lesbians as women, living in a society that devalues all women and presents particular problems for those who are gender-nonconformists. This cluster of studies, which comprised 28 percent of all the abstracts selected for qualitative analysis, examined the intersection of gender and sexuality in women. Lesbians were studied in areas that are sites of sociocultural oppression for many women, such as aging, appearance, and weight. In other words, researchers examined ideologies of conventional femininity in conjunction with ideologies of heterosexuality. Thus, this cluster seems to represent the potential for an integrated feminist perspective on lesbians. However, research on this cluster of topics has declined over time.

The second largest cluster, comprising 14 percent of abstracts in the sample, used predominantly heterosexual samples and investigated attitudes toward LB women. Within this cluster, lesbian or bisexual sexuality is not the problem; heterosexism is. Thus, this cluster represents a reversal of the psychopathological model and an implicit endorsement or acceptance of sexual diversity. Research on the origins, structure, maintenance, and change of heterosexist attitudes is valuable and important at this historical moment, when a large proportion of the population still endorses heterosexist prejudice (Herek, 1993). It is encouraging that research in this cluster has at least remained constant over time.

Five smaller clusters seemed to reflect a 'Lesbian as Problem' orientation, paralleling the Woman as Problem framework identified by Crawford and Marecek (1989). These included the Sex/STD, Mental Health, Therapeutic Issues, Violence, and Alcohol/Drug clusters. Like the earlier Woman as Problem framework, which was influential, even dominant, in the emerging field of women and gender, the Lesbian as Problem framework was also prominent. Together, the studies in these five clusters comprised about 42 percent of all those
in the sample. Also, these were the clusters that emerged most recently, suggesting a growing influence. An alternative interpretation of the 'problem' cluster is that, as lesbians and bisexual women become more visible, their legitimate needs are being addressed. The strength of such 'problem' orientations is that they conceptualize the struggles of women as worthy of study and address the needs of populations that may otherwise be overlooked. A potential limitation is that these problems and needs may be conceived as the product of personal internal factors rather than societal oppression.

The remaining clusters consisted of topics related to lesbian parenting, custody issues, work environments, and coming out to others. Along with the handful of outlier studies that focused on aging and social support, these clusters may be characterized as reflecting a 'Life in Heterosexist Society' framework. In these clusters, the focus is on the intersection (and collision) of gay identity with straight social norms and institutions. Like the Gender Identity cluster, this framework has potential for developing gay-centered paradigms for psychology.

While the number of studies indexing LB women comprises only a miniscule proportion of all psychological research, the absolute number of studies is considerable, and there have been changes in emphasis over time. It is no longer possible for researchers, textbook authors, clinicians, and policy makers to plead ignorance about LGB psychology on the grounds of 'lack of research'. As Kitzinger (2001) noted: 'With the enormous growth of LGBT psychology over the last decade, every feminist psychologist, whatever her area of expertise, should assume that there is LGBT psychology relevant to her work' (p. 284).

Although the research we analysed is surely relevant, it is far from complete. What is missing from psychology's LB research agenda? Strikingly absent is research on bisexual women or bisexuality as a conceptual category. Although the incidence of bisexuality is substantial by several measures (fantasy, behavior, identity, etc.), there is still a tendency to deny its legitimacy (Hoburg et al., 2004; Paul, 2000; Petford, 2003, Rust, 2000). The dominant conceptualization of sexuality as a heterosexual/homosexual dichotomy renders bisexuality both 'uniquely conceivable and uniquely inconceivable in Western culture' (Rust, 2000: 205). Bisexuality thus is often viewed as transitory, transitional, or a denial of one's 'true' homosexual identity (Paul, 2000). It is much less often viewed as a possible indication of adaptive flexibility (but see Konik and Crawford, 2004; Zinik, 1985). Moreover, the meaning of bisexuality is entangled with the politics of the gay rights movement. To the extent that notions of a fully realized 'gay identity' as part of a 'gay community' inform gay rights activism, bisexual people are left with 'neither a clear social identity nor a strong political voice' (Paul, 2000:19). The dearth of research on bisexual women suggests that this category continues to be conceptually and politically threatening.

Equally striking is the lack of an overall positive model of diverse sexualities. For example, there is little research on the normative sexual behavior and satisfaction of LB women. There is also a lack of research on positive coping skills and strengths of LB women, and, more generally, a lack of recognition that
diverse sexualities and life experiences may promote the development of particular strengths in individuals. The key elements of lesbian and gay psychology proposed by Brown (1989) - biculturalism, marginality, and normative creativity are not yet reflected in positive ways in psychological research.

Does research on LB women provide any parallels to the Transformation framework proposed by Crawford and Marecek (1989)? One characteristic of this framework, according to Crawford and Marecek, is attention to the social and political implications of one's research topics. The movement to destigmatize homosexuality by removing it from the DSM was radical in its social and political potential. According to Laura Brown (1989):


#### Abstract

In challenging that one dearly held tenet of one branch of the tree of the behavioral sciences, we were, in the end, also challenging the whole structure, all of the assumptions that went into creating that idea. It's not certain that we realized that or even would have admitted how radical in fact this apparently simple goal was. To take the word out of the Diagnostic and Statistical Manual was simply one aspect of challenging the entire system of thinking that had allowed it to be placed there at all (p. 455).


We would argue that, despite some changes in research quantity and emphasis, the transformative potential of LBG psychology - its challenge to heterocentric thought - remains largely undeveloped. Why should this be? Perhaps doing research on LBG populations still carries a stigma that is manageable only if the research is firmly ensconced in a traditional paradigm. Some topics, such as reconceptualizing bisexuality or studying LB women's sexuality, may be too threatening. Political pressures, too, may lead to assimilationist research. To some, advocating for gay marriage and full civil rights for gays may seem contingent on showing that gay and lesbian people are similar to or even better adjusted than heterosexual people. For example, a recent review of research on gay and lesbian couples concluded that, compared to heterosexual couples, they assigned household labor more fairly, resolved conflicts more constructively, and so on (Kurdek, 2005). The review did not discuss sexual behavior or sexual satisfaction in LG couples, nor did it include bisexuals.

Future critical research could determine whether doing LGB research stigmatizes the researcher, and how the gay rights movement may be shaping research agendas. Whatever the reasons, it seems that, to date, Brown's vision of transforming psychology through a gay/lesbian paradigm remains just that - a utopian vision.

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## NOTES

1. We conducted a separate search on abstracts excluding abstracts targeting animals or children. Because in the PsycInfo database there is no special target population classified as children, we used a wildcard of child* to exclude research targeting children. Because it is possible that excluding child* from research on LGBs may under-estimate the number of abstracts on LGBs, the exclusion of child* was only used for the search on other populations. The very conservative estimate showed that research on gay men reached as high as 1.4 percent in 1996-98, whereas research on lesbians remained less than 1 percent.
2. Although trends in studies of gay men are outside the scope of this article, we suspect that this increase reflects research on HIV/AIDS. This speculation was supported when we inspected abstracts on HIV: the increase of abstracts on gay men in general coincided with the increase of abstracts on HIV, $r=0.87, p<.001$.
3. To yield a manageable yet unbiased sample of articles for detailed content analysis, the inclusion criteria for qualitative measures were more restrictive than the criteria for quantitative measures. We considered journals to be the main venue for presentation of empirical data; therefore, we limited the scope of this study to journal articles.
4. A list of categories and frequencies is available upon request.
5. The dendrogram and a table of agglomeration coefficients are available upon request.

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