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Development and Validation of a Scale Measuring Modern Prejudice Toward Gay Men and Lesbian Women

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ABSTRACT. This paper describes the psychometric properties of the Modern Homonegativity Scale (MHS), which measures contemporary negative attitudes toward gay men and lesbians (i.e., attitudes not based on traditional or moral objections to homosexuality). In Study 1 (N = 353), a preliminary version of the MHS was developed, and its psychometric properties were examined. Participants in Studies 2 and 3 (Ns = 308 and 233, respectively) completed the MHS and other attitudinal measures. The relationships among these variables were investigated to provide a
more comprehensive assessment of the scale’s construct validity. In Study 4 ($N = 36$), a behavioural expression of modern homonegativity was examined using the attributional ambiguity paradigm. The results of these studies indicate that the MHS is unidimensional, possesses a high degree of internal consistency, and is factorially distinct from a measure of old-fashioned homonegativity. As hypothesized, scores on the MHS correlated positively with political conservatism, religious behaviour, religious self-schema and modern sexism, but did not correlate significantly with social desirability bias. In addition, the MHS appears to be less susceptible to floor effects than a commonly used measure of old-fashioned homonegativity. Finally, the experimental study revealed that participants obtaining high scores on the MHS were less likely to sit beside individuals wearing T-shirts with pro-gay or pro-lesbian slogans when they could justify their seating choice on nonprejudicial grounds. [Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@haworthpress.com> Website: <http://www.Haworth Press.com> © 2002 by The Haworth Press, Inc. All rights reserved.]

KEYWORDS. Attitudes, prejudice, discrimination, homophobia, homosexuality, gay men, lesbians, college students, modern prejudice, scale development

Research suggests that many college and university students reject blatantly pejorative beliefs about gay men and lesbians. In studies examining the prevalence of homonegativity, Balanko (1998), Schellenberg, Hirt, and Sears (1999), Simon (1995), Simoni (1996), and Waldo and Kemp (1997) found that participants’ mean scores on two commonly used measures (i.e., the Attitudes Toward Lesbians Scale, or ATL and the Attitudes Toward Gay Men Scale, or ATG; Herek, 1988) fell below the scale mid-point. For example, Simon found that participants’ average scores on the ATL were 41.6 (males) and 38.7 (females). A score of 50 represents neutrality on this scale, with higher scores denoting greater homonegativity. Similarly, Simoni found that participants’ average scores on the ATLG were 44.5 (males) and 37.6 (females). In this study, a score of 60 denoted neutral attitudes toward gay men and lesbians.

Do these findings allow one to conclude that homonegativity is waning on college and university campuses? Not necessarily. The small number of studies using multiple indices of homonegativity present a somewhat darker picture. Norris (1992) surveyed a large number of students attending a liberal arts college in the midwestern United States. Results indicated that there was
widespread attitudinal support for gay men, lesbians, and bisexuals. For example, only 4.6% of Caucasian respondents strongly agreed/agreed with the statement, “I would refuse to live with a lesbian, gay, or bisexual person.” However, Norris also found that a majority of participants reported seeing homonegative graffiti in the washrooms on campus. In addition, approximately 68% of white homosexual and bisexual participants felt it necessary to deny they were gay, lesbian, or bisexual and 40% reported they had been verbally harassed on campus because of their perceived sexual orientation. Balanko (1998) surveyed a large group of heterosexual undergraduate students enrolled in introductory psychology courses. Participants’ mean score on the ATLG was below the scale mid-point, which indicates that their attitudes toward lesbians and gay men were quite positive. Other indicators, however, suggested that homonegativity was fairly prevalent. Similar to Norris’ findings, 50% of gay and lesbian students surveyed by Balanko heard demeaning remarks about homosexuals and saw antigay graffiti; 79% reported hiding their sexual orientation from their undergraduate peers; and 68% felt it likely that a gay, lesbian, or bisexual person would be attacked on campus.

How can such contradictory findings be reconciled? Why do attitudinal measures such as the ATLG suggest that post-secondary institutions are quite accepting of gay men and lesbians, whereas other indicators such as the prevalence of homonegative graffiti and students’ fear of being openly gay or lesbian on campus suggest that colleges and universities possess, at least, moderate levels of homonegativity? What is responsible for the apparent disjunction between these types of measures?

One possible explanation is that scales such as the ATLG are highly reactive. That is, participants may conceal their true level of homonegativity in an effort to present themselves in a positive way. Research suggests, however, that the ATLG is not linked to socially desirable response sets (Herek, 1988). Thus, it appears unlikely that these results are an artefact of reactivity.

Another possible explanation is sampling bias. Specifically, researchers such as Balanko (1998) and Simoni (1996) may have relied on convenience samples that were relatively homogeneous with respect to their attitudes toward gay men and lesbians. It should be noted, however, that these studies were conducted in different geographic locations in North America (e.g., Saskatchewan and New York State), and that the respondents were enrolled in various faculties such as education, arts, and business.

Finally, it is possible that scales such as the ATLG examine a specific type of homonegativity; one that many college and university students no longer endorse. Indeed, when inspecting the content of such measures, it is evident that many of their items reflect an “old-fashioned” prejudice against gay men and lesbians (i.e., prejudice rooted in traditional religious and moral beliefs and misconceptions about homosexuality). Students may evidence low levels of homonegativity on old-fashioned measures, not because they possess fa-
vourable attitudes toward gay men and lesbians, but simply because they consider old-fashioned measures to be anachronistic. The authors of the present study believe that this explanation may account for the “paradoxical” findings that have been documented by a number of researchers (e.g., Norris, 1992). Based on our experiences at various universities and colleges, we propose that homonegativity has not abated at post-secondary institutions but, rather, has undergone a transformation from “old-fashioned” to “modern.” Specifically, students’ prejudice against gay men and lesbians has moved away from biblical injunctions and moral objections to more abstract concerns. These concerns may include: (1) gay men and lesbians are making illegitimate (or unnecessary) demands for changes in the status quo (e.g., spousal benefits); (2) discrimination against homosexual men and women is a thing of the past; and (3) gay men and lesbians exaggerate the importance of their sexual preference and, in so doing, prevent themselves from assimilating into mainstream culture.

The present series of studies were conducted to develop and validate a measure of “modern” prejudice toward gay men and lesbians. In Study 1, a preliminary version of the Modern Homonegativity Scale (MHS) was constructed. The scale’s reliability, factor structure, and construct validity were examined. Participants in Studies 2 and 3 completed 13- and 12-item versions of the MHS, respectively, as well as other attitudinal measures. The relationships among these variables were explored. In Study 4, a behavioural expression of modern homonegativity was investigated using the attributional ambiguity paradigm.

STUDY 1

A preliminary version of the MHS was developed by the authors in consultation with several gay and lesbian graduate students. Using modern racism (e.g., McConahay, 1986) and modern sexism (e.g., Swim, Aikin, Hall, & Hunter, 1995) as theoretical frameworks, the authors asked these students to generate items reflecting prejudicial attitudes that “liberal” individuals may hold toward lesbians and gay men. The authors emphasized that they were not interested in traditional objections to homosexuality (e.g., “gay men should not be allowed to work with children” and “lesbianism is sinful”); rather, the student’s goal was to articulate more contemporary manifestations of prejudice. The content validity of the items was assessed by a member of a local gay and lesbian organization. Based on feedback from this individual, several items were revised.

Fifty items were generated by this process; however, the length of this scale was considered prohibitive. Consequently, the purpose of Study 1 was to produce a shortened version of the MHS.

A subsidiary purpose was to conduct a preliminary investigation of the scale’s construct validity. Research indicates that measures of prejudice
correlate positively with political conservatism (Bierly, 1985) and with measures of religiosity such as church attendance (Herek, 1984). Although the MHS examines contemporary forms of homonegativity, there was no compelling theoretical rationale to suggest that individuals’ religious and political orientations should be unrelated to their level of modern homonegativity. Therefore, in accordance with prior research, it was hypothesized that political conservatism and measures of religious behaviour (i.e., frequency of church attendance) and religious self-schema (i.e., how religious an individual perceives him or herself to be) would correlate positively with scores on the MHS.

Participants

Participants were 353 (149 males, 204 females) self-identified heterosexual university students in British Columbia, Canada. They ranged in age from 17 to 45 years ($M = 21.8, SD = 4.9$). Approximately 8.5% ($n = 30$) were “very liberal,” 23.4% ($n = 82$) were “liberal,” 25.4% ($n = 89$) were “somewhat liberal,” 7.4% ($n = 26$) were “somewhat conservative,” 5.4% ($n = 19$) were “conservative,” and .01% ($n = 3$) were “very conservative.” Twenty-nine percent ($n = 101$) of participants stated that they did not know whether they were conservative or liberal. With respect to religious attendance, 10.8% ($n = 38$) reported attending church every week, 13% ($n = 46$) reported sporadic attendance, 24.1% ($n = 85$) reported attending only on special occasions, and 52.1% ($n = 184$) reported never attending church. Finally, the proportion of participants who saw themselves as very religious, somewhat religious, slightly religious, or not at all religious was (in order): 6.3% ($n = 22$), 17.9% ($n = 63$), 27.1% ($n = 95$), and 43.9% ($n = 154$). Five percent ($n = 17$) of participants stated that they did not know whether they were or were not religious.

Measures

Modern Homonegativity Scale (MHS). The preliminary version of the MHS contains 50 items, eight of which require reverse scoring, and uses a 5-point Likert-type scale (1 = strongly disagree; 5 = strongly agree). Scores can range from 50 to 250, with higher scores representing greater levels of modern homonegativity.

Political Conservatism. Participants were asked to indicate their political orientation: liberal, somewhat liberal, somewhat conservative, or conservative. Scores can range from 1 to 4, with higher scores reflecting greater conservatism. Single-item measures of political conservatism have been found to be reliable and valid (Gerbner, Gross, Morgan, & Signorielli, 1994; Wagstaff & Quirk, 1983).
Religiosity. Religious behaviour was measured by a single item in which participants indicated whether they attend religious services: never, on special occasions, now and then, or usually. Religious self-schema was measured by a single item in which participants indicated whether they consider themselves to be: not at all religious, slightly religious, somewhat religious, or very religious. For both items, scores can range from 1 to 4, with higher scores denoting greater levels of religiosity. Research suggests that single-item measures of religious behaviour and religious self-schema are psychometrically sound (Gorsuch & McFarland, 1972).

Procedure

Questionnaires were distributed to students enrolled in a number of undergraduate courses. Students were informed that participation was strictly voluntary and that all responses would be anonymous and confidential. The survey took approximately 20 minutes to complete.

Results

Item Reduction

In accordance with criteria described by Benson and Vincent (1980), MHS items were dropped if: (1) one of the response categories was higher than 50%; (2) more than two of the five response categories had a response rate less than 10%; and (3) the middle response category (e.g., “don’t know”) was above 30%. This procedure resulted in the elimination of 25 items.

Dimensionality of the MHS

A principal components analysis (PCA) followed by oblique rotation was conducted on the remaining 25 items. PCA was selected because the researchers’ goal was item reduction (Fabrigar, Wegener, MacCallum, & Strahan, 1999). Inspection of the scree plot indicated that a one-component solution should be retained. As per the recommendation of Comrey and Lee (1992 as cited in Tabachnick & Fidell, 1996), only loadings of .30 or higher were considered to contribute significantly to this component. The final version consisted of thirteen items.

Reliability

Cronbach’s alpha for the 13-item version of the MHS was .93. Alpha coefficients for males and females were .91 and .92, respectively. For males, cor-
rected item-total correlations ranged from .46 to .74, with an average item-total correlation of .63. For females, corrected item-total correlations ranged from .52 to .74, with an average item-total correlation of .65.

**Construct Validity**

As hypothesized, scores on the MHS correlated positively with self-reported political conservatism for males, $r = .46$, $p < .001$, and females, $r = .53$, $p < .001$. Also, as expected, self-reported religious behaviour correlated positively with MHS scores for males, $r = .23$, $p < .005$, and females, $r = .28$, $p < .001$, as did religious self-schema, $r = .20$, $p < .05$, (males) and $r = .28$, $p < .001$, (females).

**Discussion**

The results of Study 1 indicate that the 13-item version of the MHS is a unidimensional and reliable measure of modern homonegativity. In addition, the positive correlations between the MHS and political conservatism, religious behaviour, and religious self-schema, provide preliminary evidence for the construct validity of the scale.

**STUDY 2**

The purpose of Study 2 was to further investigate the construct validity of the 13-item version of the MHS. Of particular concern was the scale’s conceptual distinctiveness from a measure of old-fashioned homonegativity and its relationships with other constructs such as modern sexism.

Research suggests that modern forms of prejudice such as modern racism and modern sexism are interrelated (Swim et al., 1995). Extrapolating from such findings, it was posited that scores on the MHS should correlate positively with scores on a measure of modern sexism.

Further, if scales designed to measure modern prejudice are distinct from old-fashioned measures, a stronger correlation should exist between modern measures of prejudice than between modern and old-fashioned measures of prejudice (Campbell, Schellenberg, & Senn, 1997; Swim & Cohen, 1997). Consequently, it was hypothesized that: (1) modern homonegativity and modern sexism correlate more strongly than modern homonegativity and old-fashioned sexism; and (2) modern homonegativity and modern sexism correlate more strongly than old-fashioned homonegativity and modern sexism.

A subsidiary purpose of Study 2 was to investigate whether responses on the MHS are influenced by social desirability bias.
Participants

Participants were 308 (148 males; 160 females) self-identified heterosexual university students in British Columbia, Canada. Participants’ ages ranged from 18 to 51 ($M = 22.5, SD = 4.8$).

Measures

Attitudes Toward Women Scale (ATWS). The ATWS (Spence, Helmreich, & Stapp, 1973) measures traditional, or old-fashioned, sexist attitudes toward women. It contains 15 items and, in the present study, uses a 5-point Likert-type scale (1 = strongly disagree; 5 = strongly agree). Scores can range from 15 to 75, with higher scores reflecting greater levels of sexism. Research suggests that the ATWS possesses adequate psychometric properties (Spence & Hahn, 1997; Swim & Cohen, 1997).

Homonegativity Scale (HS). Old-fashioned negative attitudes toward homosexuals were measured using gay and lesbian versions of the Homonegativity Scale (HS-G and HS-L, respectively; Morrison, Parriag, & Morrison, 1999). Each version consists of six items and uses a 5-point Likert-type scale (1 = strongly disagree; 5 = strongly agree). Scores can range from 6 to 30, with higher scores denoting greater homonegativity. Research suggests that the HS is psychometrically sound (Morrison et al., 1999).

Marlowe-Crowne Social Desirability Scale (MC-SDS Form C; Reynolds, 1982). This scale measures the tendency to respond in a culturally appropriate manner. Form C contains 13 items and uses a true/false response format (1 = true; 2 = false). Scores can range from 13 to 26, with higher scores representing greater levels of social desirability. This short-form version of the MC-SDS possesses adequate psychometric properties (Reynolds, 1982).

Modern Homonegativity Scale (MHS). Research suggests that people hold more negative attitudes toward homosexuals of the same sex (Whitley, 1988). Thus, parallel forms of the 13-item version of the MHS were constructed. Specifically, one version pertained to gay men (MHS-G) and the other pertained to lesbians (MHS-L). For example, the item “Gay men and lesbians have all the rights they need” was revised to read, “Gay men have all the rights they need” for the MHS-G and “Lesbians have all the rights they need” for the MHS-L. Both versions use a 5-point Likert-type scale (1 = strongly disagree; 5 = strongly agree). In the present study, scores can range from 13 to 65, with higher scores representing greater modern homonegativity.

Neosexism Scale (NS). The NS (Tougas, Brown, Beaton, & Joly, 1995) measures modern sexism. It contains 11 items, and uses a 5-point Likert-type
scale (1 = strongly disagree; 5 = strongly agree). Scores can range from 11 to 55, with higher scores denoting greater levels of modern sexism. Research indicates that the NS is reliable and valid (Campbell et al., 1997).

**Procedure**

Questionnaires were distributed to students enrolled in a number of undergraduate courses. Only those who had not participated in Study 1 were used in the present study. Participants were instructed to: (1) read and sign the informed consent sheet; (2) indicate their willingness to volunteer for other psychology experiments; and (3) provide a personal identification number that could be used to solicit their involvement for Study 4.

Due to limited resources, participants’ attitudes toward same-sex homosexuals were investigated (see Whitley [1988] for additional rationale). Thus, male participants received the MHS-G and females received the MHS-L. Most students finished the questionnaire in approximately 25 minutes.

**Results**

Alpha coefficients for all scales are presented in Table 1.

To assess the dimensionality of the MHS-G and MHS-L, maximum likelihood (ML) factor analyses followed by oblique rotation (i.e., direct oblimin with a delta set at zero) were conducted. ML is thought to have several advantages over other extraction methods (Bryant & Yarnold, 1995). For example, ML provides a chi-square/degrees of freedom ratio to assess the adequacy of model fit. According to Newcomb (1994), a ratio less than two denotes models

<table>
<thead>
<tr>
<th>Scale</th>
<th>Males (n = 148)</th>
<th>Females (n = 160)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS</td>
<td>.91</td>
<td>.90</td>
</tr>
<tr>
<td>ATWS</td>
<td>.76</td>
<td>.71</td>
</tr>
<tr>
<td>HS</td>
<td>.83</td>
<td>.75</td>
</tr>
<tr>
<td>MC-SDS</td>
<td>.57</td>
<td>.70</td>
</tr>
<tr>
<td>NS</td>
<td>.76</td>
<td>.72</td>
</tr>
</tbody>
</table>

Note: MHS = Modern Homonegativity Scale; ATWS = Attitudes Toward Women Scale; HS = Homonegativity Scale; MC-SDS = Marlowe-Crowne Social Desirability Scale (Form C); NS = Neosexism Scale
that fit reasonably and provide a sufficient representation of the data. In addition, if residuals for a specified model are less than .10, the dimensionality of that model is supported. Finally, oblique rotation was selected because it was anticipated that, if the MHS-G and MHS-L are multidimensional, the factors should be, at least, modestly intercorrelated.

One-factor solutions, which accounted for 45% and 47% of the total variance, were obtained for the MHS-G and MHS-L, respectively. The chi-square/degrees of freedom ratio was less than two for both scales, which suggests that a one-factor solution provides acceptable fit (Newcomb, 1994). In addition, all residuals were less than .10, which further supports the unidimensionality of these factor solutions.

**Conceptual Distinction Between Modern and Old-Fashioned Homonegativity**

Items from the MHS-G and HS-G (male participants) and MHS-L and HS-L (female participants) were factor analyzed using ML extraction with oblique rotation. The analysis for males produced a two-factor solution with a chi-square/degrees of freedom ratio of 1.47. Factor 1 accounted for 42.1% of the total variance. All of the MHS-G items loaded on this factor. Factor 2 accounted for 9.7% of the total variance. All of the HS-G items loaded on Factor 2. The factor loadings for the MHS-G and the HS-G are provided in Table 2.

The analysis for females produced a three-factor solution with a chi-square/degrees of freedom ratio of 1.06. Factor 1 accounted for 38.6% of the total variance, Factor 2 accounted for 9.1% of the total variance, and Factor 3 accounted for 6% of the total variance. All of the MHS-L items loaded on the first factor with one exception. The item, “The media devote far too much attention to the topic of homosexuality,” had comparable loadings on both factors 1 and 2, and was subsequently dropped. Two items from the HS-L loaded on Factor 2, and the remaining four items loaded on factor 3. The factor loadings for the MHS-L and HS-L are provided in Table 3.

**Validity of the MHS**

Intercorrelations for all scales are presented in Table 4. Inspection of the intercorrelations reveals that, as hypothesized, endorsement of modern homonegativity correlated positively with modern sexism (NS) for both males (r = .59) and females (r = .57). Fisher’s r to z transformation revealed that the correlation between modern homonegativity and modern sexism was stronger than the correlation between modern homonegativity and old-fashioned sexism for both males (z = 2.92, p < .01) and females (z = 3.96, p < .01). The correlation between modern homonegativity and modern sexism also was stronger than the correlation between old-fashioned homonegativity and modern sexism (males, z = 3.21, p < .01; females, z = 2.04, p < .05).
TABLE 2. Factor Analysis of Scales Measuring Modern and Old-Fashioned Homonegativity Toward Gay Men (Study 2; \( n = 148 \))

<table>
<thead>
<tr>
<th>Items</th>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Many gay men use their sexual orientation so that they can obtain special privileges. (MHS)</td>
<td>.68</td>
<td>.01</td>
</tr>
<tr>
<td>Gay men seem to focus on the ways in which they differ from heterosexuals, and ignore the ways in which they are the same. (MHS)</td>
<td>.60</td>
<td>.03</td>
</tr>
<tr>
<td>Gay men do not have all the rights they need. (MHS)*</td>
<td>.59</td>
<td>.07</td>
</tr>
<tr>
<td>The notion of universities providing students with undergraduate degrees in Gay and Lesbian Studies is ridiculous. (MHS)</td>
<td>.52</td>
<td>.09</td>
</tr>
<tr>
<td>The media devote far too much attention to the topic of homosexuality. (MHS)+</td>
<td>.54</td>
<td>−.18</td>
</tr>
<tr>
<td>Celebrations such as “Gay Pride Day” are ridiculous because they assume that an individual’s sexual orientation should constitute a source of pride. (MHS)</td>
<td>.64</td>
<td>.10</td>
</tr>
<tr>
<td>Gay men still need to protest for equal rights. (MHS)*</td>
<td>.58</td>
<td>.21</td>
</tr>
<tr>
<td>Gay men should stop shoving their lifestyle down other people’s throats. (MHS)</td>
<td>.83</td>
<td>−.04</td>
</tr>
<tr>
<td>If gay men want to be treated like everyone else, then they need to stop making such a fuss about their sexuality/culture. (MHS)</td>
<td>.77</td>
<td>−.03</td>
</tr>
<tr>
<td>Just because a man is gay does not mean that he has a mental disorder. (HS)*</td>
<td>−.06</td>
<td>.55</td>
</tr>
<tr>
<td>Gay men should have the same rights as straight (heterosexual) men. (HS)*</td>
<td>.01</td>
<td>.58</td>
</tr>
<tr>
<td>Gay men should not be allowed to work with children. (HS)</td>
<td>.09</td>
<td>.66</td>
</tr>
<tr>
<td>Gay men are immoral. (HS)</td>
<td>.20</td>
<td>.63</td>
</tr>
<tr>
<td>Gay men who are “out of the closet” should be admired for their courage. (MHS)*</td>
<td>.47</td>
<td>.18</td>
</tr>
<tr>
<td>Gay men should stop complaining about the way they are treated in society, and simply get on with their lives. (MHS)</td>
<td>.67</td>
<td>.13</td>
</tr>
<tr>
<td>Those who support the rights of gay men are probably gay themselves. (HS)</td>
<td>.20</td>
<td>.49</td>
</tr>
<tr>
<td>In today’s tough economic times, Canadians’ tax dollars shouldn’t be used to support gay men’s organisations. (MHS)</td>
<td>.54</td>
<td>.09</td>
</tr>
<tr>
<td>Gay men should be avoided whenever possible. (HS)</td>
<td>.03</td>
<td>.75</td>
</tr>
<tr>
<td>Gay men have become far too confrontational in their demand for equal rights. (MHS)</td>
<td>.71</td>
<td>.03</td>
</tr>
</tbody>
</table>

Eigenvalue | 8.00
Total Variance Accounted For | 42.1%

* items are reverse-scored
+ item was deleted following Study 2, leaving a 12-item version of the MHS
### TABLE 3. Factor Analysis of Scales Measuring Modern and Old-Fashioned Homonegativity Toward Lesbians (Study 2; n = 160)

<table>
<thead>
<tr>
<th>Items</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Many lesbians use their sexual orientation so that they can obtain special privileges. (MHS)</td>
<td>.52</td>
<td>-.19</td>
<td>.28</td>
</tr>
<tr>
<td>Lesbians seem to focus on the ways in which they differ from heterosexuals, and ignore the ways in which they are the same. (MHS)</td>
<td>.60</td>
<td>.03</td>
<td>.09</td>
</tr>
<tr>
<td>Lesbians do not have all the rights they need. (MHS)*</td>
<td>.68</td>
<td>.00</td>
<td>-.13</td>
</tr>
<tr>
<td>The notion of universities providing students with undergraduate degrees in Gay and Lesbian Studies is ridiculous. (MHS)</td>
<td>.40</td>
<td>.04</td>
<td>.22</td>
</tr>
<tr>
<td>The media devote far too much attention to the topic of homosexuality. (MHS)+</td>
<td>.30</td>
<td>-.35</td>
<td>.07</td>
</tr>
<tr>
<td>Celebrations such as “Gay Pride Day” are ridiculous because they assume that an individual’s sexual orientation should constitute a source of pride. (MHS)</td>
<td>.49</td>
<td>.01</td>
<td>.26</td>
</tr>
<tr>
<td>Lesbians still need to protest for equal rights. (MHS)*</td>
<td>.82</td>
<td>.16</td>
<td>-.12</td>
</tr>
<tr>
<td>Lesbians should stop shoving their lifestyle down other people’s throats. (MHS)</td>
<td>.69</td>
<td>-.10</td>
<td>.19</td>
</tr>
<tr>
<td>If lesbians want to be treated like everyone else, then they need to stop making such a fuss about their sexuality/culture. (MHS)</td>
<td>.65</td>
<td>-.15</td>
<td>.16</td>
</tr>
<tr>
<td>Just because a woman is a lesbian does not mean that she has a mental disorder. (HS)*</td>
<td>.11</td>
<td>.40</td>
<td>.16</td>
</tr>
<tr>
<td>Lesbians should have the same rights as straight (heterosexual) women. (HS)*</td>
<td>-.06</td>
<td>.03</td>
<td>.51</td>
</tr>
<tr>
<td>Lesbians should not be allowed to work with children. (HS)</td>
<td>.12</td>
<td>.08</td>
<td>.57</td>
</tr>
<tr>
<td>Lesbians are immoral. (HS)</td>
<td>.03</td>
<td>.03</td>
<td>.72</td>
</tr>
<tr>
<td>Lesbians who are “out of the closet” should be admired for their courage. (MHS)*</td>
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<td>.18</td>
</tr>
<tr>
<td>Lesbians should stop complaining about the way they are treated in society, and simply get on with their lives. (MHS)</td>
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<td>-.13</td>
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</tr>
<tr>
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<td>.55</td>
</tr>
<tr>
<td>In today’s tough economic times, Canadians’ tax dollars shouldn’t be used to support lesbian organisations. (MHS)</td>
<td>.60</td>
<td>.03</td>
<td>-.10</td>
</tr>
<tr>
<td>Lesbians should be avoided whenever possible. (HS)</td>
<td>.20</td>
<td>.57</td>
<td>.39</td>
</tr>
<tr>
<td>Lesbians have become far too confrontational in their demand for equal rights. (MHS)</td>
<td>.69</td>
<td>-.01</td>
<td>.01</td>
</tr>
</tbody>
</table>

**Eigenvalue**

| 7.33   | 1.73 | 1.14 |

**Total Variance Accounted For**

| 38.6%  | 9.1% | 6.0% |

* items are reverse scored

+ item was deleted following Study 2, leaving a 12-item version of the MHS
Finally, scores on the MHS-G and MHS-L did not correlate with social desirability bias ($r_{s} = -0.03$ and $0.03$, respectively).

**Discussion**

The results of this study suggest that both versions of the MHS possess high levels of reliability, are unidimensional, and conceptually distinct from their old-fashioned counterparts. As well, scores on the MHS-G and MHS-L correlated positively with neosexism and did not correlate with social desirability bias. Finally, Fisher’s $r$ to $z$ transformation revealed that correlations between modern forms of prejudice were stronger than correlations between modern and old-fashioned forms of prejudice.

**STUDY 3**

A major limitation of the preceding study was that it did not investigate students’ attitudes toward homosexuals of the opposite-sex. This limitation was addressed in Study 3 by randomly distributing copies of the MHS-G and MHS-L to male and female participants. A subsidiary purpose of the present study was to compare and contrast participants’ responses on the MHS with responses on the Attitudes Toward Lesbians and Gay Men Scale (ATLG), a measure of old-fashioned homonegativity.

**Participants**

Participants were 233 (64 males, 169 females) self-identified heterosexual college students in Alberta, Canada.
Measures

Attitudes Toward Lesbians and Gay Men Scale-Short-Form (ATLG-S). The short-form version of the ATLG (Herek, 1988) consists of two, five-item subscales; one measures negative attitudes toward lesbians, and the other measures negative attitudes toward gay men. In the present study, a five-point Likert-type scale was used (1 = strongly disagree; 5 = strongly agree). Scores on each of the subscales can range from 5 to 25, with higher scores denoting greater homonegativity. Research by Herek (1988) and Herek and Capitanio (1996) indicate that the ATLG is psychometrically sound.

Modern Homonegativity Scale (MHS). The results of the factor analyses conducted in Study 2 suggest that one of the “modern” items on the MHS-L had comparable loadings on two factors. Thus, in the present study, this item was deleted from both versions of the MHS, resulting in a 12-item scale. Scores on this version of the MHS can range from 12 to 60, with higher scores denoting greater homonegativity.

Procedure

Questionnaires containing either the MHS-G/ATG-S or MHS-L/ATL-S were randomly distributed to students enrolled in a number of introductory psychology courses. Thirty-three males and 82 females completed the MHS-G/ATG-S, and 31 males and 87 females completed the MHS-L/ATG-S. Ethical concerns were satisfied by use of a consent form which indicated that participation was strictly voluntary and that all responses would be anonymous and confidential.

Results

Reliability

The 12-item version of the MHS-G had an alpha coefficient of .91 for both males and females. The MHS-L had an alpha coefficient of .89 for males and .85 for females. Alpha coefficients for the ATL-S and ATG-S were (in order) .89 and .89 (males) and .87 and .89 (females).

Gender Differences on Modern and Old-Fashioned Homonegativity

Independent samples t-tests were conducted to determine whether heterosexual men and women differ in their levels of modern homonegativity toward lesbians and gay men. Results indicated that males (M = 41.9, SD = 9.1) obtained significantly higher scores than females (M = 37.3, SD = 10.1) on the MHS-G, t(113) = 2.25, p < .03. Males (M = 42.8, SD = 9.7) also obtained significantly higher scores than females (M = 38.8, SD = 8.5) on the MHS-L, t(116) = 2.16, p < .04. The d values for these t statistics are .42 and .40, respectively. On the ATG-S,
males’ scores ($M = 14.6, SD = 5.4$) were significantly higher than females’ scores ($M = 11.7, SD = 4.9$), $t(112) = 2.81, p < .01, d = .53$. However, on the ATL-S, no significant gender differences were observed (males: $M = 12.2, SD = 5.3$; females: $M = 12.0, SD = 4.8$), $t(116) = .21, p = ns$.

**Comparison of Responses on the MHS and the ATLG-S.**

It is the authors’ contention that measures of old-fashioned homonegativity such as the ATLG-S contain items that college and university students may perceive as being somewhat dated. If so, respondents should be more likely to strongly disagree/disagree with items on the ATLG-S than with items on the MHS.

Mean item responses for each scale were computed and paired t-tests were used to determine if participants’ level of homonegativity varied as a function of whether the measure used was modern or old-fashioned.

Males’ average response to items on the MHS-G ($M = 3.2, SD = .7$) was significantly greater than their average response to items on the ATG-S ($M = 2.9, SD = 1.1$), $t(32) = 2.96, p = .006, d = 1.05$. Approximately 58% of male respondents scored above the scale mid-point on the MHS-G in comparison to 36% on the ATG-S. Females’ average response to items on the MHS-G ($M = 2.9, SD = .8$) was significantly greater than their average response to items on the ATG-S ($M = 2.3, SD = .9$), $t(79) = 8.49, p < .0001, d = 1.91$ (i.e., 34% of females scored above the scale mid-point on the MHS-G in comparison to 23% on the ATG-S).

Males’ average response to items on the MHS-L ($M = 3.3, SD = .8$) was significantly greater than their average response to items on the ATL-S ($M = 2.5, SD = 1.1$), $t(30) = 4.91, p < .0001, d = 1.79$. The proportions scoring above the mid-point on the MHS-L and the ATL-S were 68% and 19%, respectively. For females, the average item score on the MHS-L was $3.0 (SD = .7)$ which, again, was significantly greater than the average response to items on the ATL-S ($M = 2.4, SD = 1.0$), $t(85) = 6.79, p < .0001, d = 1.47$. The proportion scoring above the mid-point on the MHS-L was 42%, whereas the proportion was 20% on the ATL-S.

**Discussion**

The results of Study 3 suggest that the 12-item gay and lesbian versions of the MHS possess adequate reliability. A comparison of responses to the MHS and the ATLG-S also strengthens the authors’ contention that old-fashioned measures may be inappropriate for use with college and university students. The mean scores on the ATL-S and ATG-S were well below the scale mid-point, and suggest that floor effects may be of concern. Also, as mentioned earlier, mean item responses on the ATG-S and ATL-S were significantly lower than mean item responses on the MHS-G and MHS-L. Although the differences between the means may appear to be relatively small, the $d$ values for these differences represented large effect sizes.
The magnitude of the disparity between participants’ responses to the MHS and the ATLG-S also becomes apparent when examining the proportion of individuals scoring above or below the scale mid-point. For example, 74.2% of male participants and 77% of female participants scored below the mid-point on the ATL-S; thus, it may be concluded that participants’ attitudes toward lesbians are quite positive. However, a more complicated picture emerges when examining responses to the MHS-L. The proportions scoring below the scale mid-point were 32.3% and 52.9% for males and females, respectively. Thus, participants’ level of modern homonegativity, as measured by the MHS-L, appears to be substantially greater than their level of old-fashioned homonegativity, as measured by the ATL-S.

**STUDY 4**

The purpose of Study 4 was to examine a behavioural expression of modern homonegativity using an attributional ambiguity technique (Snyder, Kleck, Strenta, & Mentzer, 1979). The ambiguity technique provides a covert means of detecting behavioural manifestations of prejudicial attitudes, and has been used in previous investigations of modern racism (Batson, Flink, Schoenrade, Fultz, & Pych, 1986).

Two assumptions underlie the use of attributional ambiguity: (1) individuals who endorse modern forms of prejudice need to justify their attitudes and behaviours on nonprejudicial grounds; and (2) such individuals will not act in a prejudicial manner unless a means of justification is available. The attributional ambiguity technique uses a “covert” experimental condition which enables participants to conceal their prejudicial behaviour. The other experimental condition (i.e., the “overt” condition) does not provide participants with the means to justify prejudicial behaviour.

The following hypotheses were tested: (1) in the covert condition, high-scorers on the MHS are less likely than low-scorers to sit with a confederate wearing a T-shirt with a visible pro-gay or pro-lesbian slogan; and (2) in the overt condition, high-scorers on the MHS are just as likely as low-scorers to sit with a confederate wearing a T-shirt with a visible pro-gay or pro-lesbian slogan.

**Participants**

Participants were 49 self-identified heterosexual undergraduate students (24 males; 25 females). They were randomly selected from the self-identified heterosexual respondents in Study 2 (N = 308) who scored in the top or bottom quartile on the MHS-G (males) or MHS-L (females). Several assistants solicited participants’ involvement by telephone, and testing began seven weeks after Study 2 was completed.
Confederates

Two male and two female students from an upper division social psychology course volunteered to act as confederates. They received course credit for their involvement. Prior to testing, the senior author briefed confederates about the procedure, and informed them that they would be required to wear one of two T-shirts during each experimental session. One of the T-shirts had a slogan that read, “Rolling Stones,” and the other T-shirt had a slogan that read, “I’m not gay, but my boyfriend is” (worn by the male confederates) or “Lesbians make better lovers” (worn by the female confederates).

Materials

Two rooms were used, one to run the experimental session and one to conduct the post-experimental inquiry. Each “theatre” in the experimental room was designed to accommodate two chairs which faced a TV/VCR unit. Three chairs also were used for confederates and the participant to sit in while reading the movie descriptions and completing the background questionnaire. Four video tapes of silent comedies were used (i.e., two of the same comedy for the overt condition; two different comedies for the covert condition), as well as three movie descriptions (i.e., one for the overt condition; two for the covert condition).

Measures

Background Questionnaire. Participants were given a list of activities (e.g., jogging, going to movies, etc.) and instructed to place an “X” beside the ones in which they engaged on a regular basis.

Movie Reaction Questionnaire. Using a “yes/no” format, participants indicated whether they enjoyed the movie clip on a variety of dimensions (e.g., humour, interest, and likability of the characters).

Post-Experimental Inquiry. This inquiry was adapted from a study conducted by Page (1973). It consisted of 12 questions, and required approximately 10 minutes to complete.

Experimental Procedure

Participants were randomly assigned to conditions (i.e., overt or covert) and all situational variables were counterbalanced. The numbers of males and females assigned to the overt condition were 12 and 12, respectively; the numbers assigned to the covert condition were 13 and 12. Participants were run individually by an experimenter who was blind to their MHS scores.

Prior to entering the room in which the experiment was conducted, participants were asked to read the following introduction:
We are interested in whether reactions to movies change or stay the same over time. As a participant in our research, you will be watching and giving us your reactions to a comedy that was made in the early 1920s. Both films are short (less than 5 minutes), black and white, and they are silent comedies (i.e., they have no dialogue). Before making your choice, you will be given a brief written description of each film. Also, when you typically go to the movies, you have a choice of more than one theatre. In our study, too, you will have a choice between “Theatre A” and “Theatre B.” These two theatres are showing different films, and you can choose the one you want to see.

Before you begin to watch the movie, you will be asked to complete a background questionnaire. The questionnaire will provide us with information about the kinds of activities you enjoy, and may prove useful in helping us interpret the findings of this study. After the movie, you will be asked to complete a movie reaction questionnaire. Both questionnaires are brief.

The experimental manipulation was then introduced. Participants in the overt condition were told that the video distributor had mistakenly supplied two copies of the same video, thus the movies being shown were the same. However, participants were informed that they could still choose between “Theatre A” and “Theatre B.” Participants in the covert condition were told that they would have a choice between two different movies and could select whichever “theatre” they preferred.

Participants were led into the experimental room, where two same-sex confederates were busy completing their background questionnaires. The experimenter then asked participants to sit at the same table as the confederates, which was situated approximately four metres from the television monitors. Confederates informed the experimenter that they had completed their background questionnaires and finished reading the movie description(s). Confederates were then asked by the experimenter to select their predetermined theatre. While the confederates “chose” their theatres (i.e., each sat in either “Theatre A” or “Theatre B”), the participant was given enough time to observe the pro-gay or pro-lesbian slogan. Confederates sat on the outside chair in each theatre, thus ensuring that the slogans on the back of their t-shirts were visible.

Once participants had finished reading the movie description(s) and completed their questionnaire, they were asked to select a theatre. The experimenter turned on the movies which were approximately five minutes in duration.

After the clips were finished, the experimenter asked the participant and confederates to collect their belongings and informed them that they would be taken to separate rooms to complete the movie reaction questionnaire and answer questions about the study itself. Once participants had exited the testing
room, they followed the experimenter to an adjacent room where an assistant greeted them. Participants proceeded to complete the movie reaction questionnaire and were given the post-experimental inquiry. Participants were debriefed and reminded of the importance of not disclosing the nature of the experiment to friends and acquaintances. The experiment took approximately 35 minutes to complete.

Results

Data from seven participants were eliminated because they: (1) were friends of the confederates (1 male, 1 female); (2) did not report seeing the pro-gay or pro-lesbian slogan (1 male, 2 females, respectively); or (3) expressed suspicions that the experiment was investigating whether or not individuals would sit beside a “gay” man (2 males). Of the remaining participants ($N = 42$), 36 passed a manipulation check in which they identified correctly the gay or lesbian slogan from a list of slogans. Data from these 36 participants were used in the following analyses. Due to the small sample size, data for males and females were analyzed together.

Chi-square analyses were conducted to assess the proportion of individuals selecting “Theatre A” or “Theatre B” in the overt and covert conditions. As predicted, in the covert condition, high-scorers on the MHS were less likely than low-scorers to sit beside a “gay” or “lesbian” confederate (11% versus 56%, $\chi^2 (1) = 4.0, p < .05$). However, in the overt condition, the proportion of high- and low-scoring participants who sat beside a “gay” or “lesbian” confederate did not differ significantly (56% versus 78%, $\chi^2 (1) = 1.0, p = ns$).

DISCUSSION

Results indicated that participants classified as “high-scorers” on the MHS showed a greater tendency to avoid sitting with the presumed homosexual in the covert condition wherein they could justify their seating choice on nonprejudicial grounds.

A major limitation of the present study was its small sample size, and the fact that it did not explore whether males and females evidence comparable levels of behavioural discrimination.

GENERAL DISCUSSION

The results of the four studies indicate that the MHS and its parallel forms, the MHS-G and MHS-L, are psychometrically sound. The scales are unidimensional, possess high levels of reliability, and are factorially distinct from a measure of old-fashioned homonegativity. Confirmation of hypothesized relationships between modern homonegativity and political conservatism, reli-
gious behaviour, religious self-schema, and modern sexism attests to the construct validity of the MHS. As well, comparing students’ responses to the MHS and an old-fashioned measure of homonegativity (the ATLG-S) suggests that the latter may be inappropriate for use with college and university students. In the present study, only a minority of participants scored above the scale mid-point on the ATL-S and ATG-S. Indeed, mean scores on both scales were so low that floor effects appeared to be a concern. In contrast, participants’ scores on the MHS-G and MHS-L were much more variable. Finally, results from the attributional ambiguity experiment revealed that individuals high in modern homonegativity were less likely to sit beside a “gay/lesbian” confederate when they could justify their seating choice on nonprejudicial grounds.

The MHS offers several advantages that may prove attractive to researchers examining prejudice against gay men and lesbians, particularly on college or university campuses. First, scores on the MHS did not correlate significantly with scores on a measure of social desirability bias. Therefore, in comparison to reactive measures, the MHS may provide a more accurate view of the prevalence of negative attitudes toward gay men and lesbians. Second, the final version of the MHS contains only 12 items and, thus, can be used in a variety of attitudinal surveys. Third, the gay and lesbian versions of the MHS have identical scale items. A recent study by Schellenberg et al. (1999) underscores the importance of using the same items when comparing attitudes toward gay men and lesbians. Specifically, the authors found that ATG items evoked more negative responses than ATL items, irrespective of whether they were modified to refer to lesbians or gay men. This finding indicates that the ATLG and, possibly, other instruments that use different items to examine prejudice toward gay men and lesbians may be susceptible to wording effects.

As mentioned earlier, a major limitation is that the small sample used in Study 4 did not permit separate analysis of male and female participants. Replication of this experiment, using a larger sample, is recommended. It also would be beneficial to distribute the MHS to non-student populations (e.g., university faculty). As well, additional research is needed to further demarcate the ways in which modern and old-fashioned homonegativity are conceptually distinct. For example, do individuals high in modern homonegativity evidence a stronger motivation to control their prejudiced reactions (see Dunton & Fazio, 1997) than individuals high in old-fashioned homonegativity? Also, the possible interactions between modern and old-fashioned prejudice toward gay men and lesbians should be explored.

In conclusion, the results of these studies suggest that the MHS measures a new form of homonegativity; one that differs from old-fashioned prejudice toward lesbians and gay men (i.e., prejudice rooted in traditional religious and moral beliefs). The authors’ use of the word “suggest” is intentional; clearly, additional research is needed before one can assert unequivocally that the MHS measures a form of homonegativity that is conceptually distinct from that measured by instruments such as the ATLG. However, given that the ATLG, a
commonly used measure of homonegative attitudes, appears to be susceptible to floor effects when used with college and university populations, at the very least, the MHS may prove to be a viable alternative for researchers attempting to document the prevalence of homonegativity in post-secondary institutions.

NOTES

1. We thank Dr. David F. Greenberg for providing an alternative interpretation of this “contradictory” finding. Specifically, it is possible that a majority of college students are in fact non-homonegative, and that the oppressive climate found in many post-secondary institutions may be attributed to a small minority of students. However, we believe this interpretation is inconsistent with our findings in Study 3. If most students are relatively tolerant of gay men and lesbians than one would anticipate floor effects on both old-fashioned (i.e., the ATLG-S) and modern (i.e., the MHS) indices of homonegativity. However, as predicted, floor effects were observed for the ATLG-S, but not the MHS. This result is congruent with our argument that college and university students’ putative acceptance of gay men and lesbians may stem from researchers’ use of inappropriate measures of homonegativity.

2. One should not infer that, outside the college/university environment, “old-fashioned” homonegativity has disappeared. Indeed, there is substantial evidence to suggest that this form of prejudice remains a vital force in North America (e.g., Herek & Capitanio, 1996; Herek & Glunt, 1993). For example, a national telephone survey conducted in the United States found that 55.1% of respondents agreed with the item, “male homosexuality is a perversion” and 63.6% believed that “homosexual behaviour between two men is just plain wrong” (Herek & Glunt, 1993). Thus, “old-fashioned” measures such as the ATLG remain useful in this context.

3. Participants’ personal identification number consisted of the last five digits of their telephone number, followed by both their number of brothers and sisters.

4. The correlation between old-fashioned homonegativity and old-fashioned sexism was stronger than the correlation between modern homonegativity and old-fashioned sexism for females ($z = 3.07, p < .01$) but not for males ($z = 1.53, p = ns$).

5. According to Cohen’s (1969 as cited in Wolf, 1986) guidelines, effect sizes of .2, .5, and .8 represent small, medium, and large effect sizes, respectively.

6. Seventy-four males (37 top quartile; 37 bottom quartile) and 86 females (44 top quartile; 42 bottom quartile) were eligible to participate in Study 4.

7. It should be noted that the seating preference of participants high in old-fashioned homonegativity did not differ in the overt and covert conditions. The proportion of high-scorers on the HS who chose to sit with the “gay/lesbian” confederate was $17\%$ in the covert condition, and $20\%$ in the overt condition, $[2 (1) < 1.0, p = ns]$.

REFERENCES


