

# FACTORS MODULATING STUDENTS' ATTITUDES TOWARDS HOMOSEXUALITY AT A SMALL UNIVERSITY LOCATED IN THE EASTERN TOWNSHIPS

---

Mathew W. Bellhouse-King, Benoit A. Bacon,  
Lionel G. Standing and Dale Stout  
*Bishop's University*

## ABSTRACT

A survey was conducted at a small Canadian university (Bishop's University) to examine possible predictors of students' attitudes towards homosexuality. Two attitude scales (the Index of Homophobia and the Attitudes Toward Lesbians and Gay Men Scale - short form) were administered to a sample of undergraduate students (N=263), recruited from across the academic divisions and years of university attendance. Scores on these scales were correlated against the demographic variables of age, gender, program of study, and years of education. The effects of religiosity, churchgoing, political affiliation, maternal tongue, living arrangements (on or off campus) and belief in the causes of homosexuality were also examined. Twenty-four percent of the participants were classified as either low- or high-grade homophobic on the Index of Homophobia. In univariate analyses, homophobia was found to be highest among Business students, and lowest among Humanities students; also, men were more homophobic than women, especially towards male homosexuals. Contrary to some previous claims, homophobia increased slightly with the number of years of higher education that the subject had received. However, in a multivariate analysis, homophobia was associated ( $R = .58$ ) only with subjects who were of male gender, Francophone rather than Anglophone, and politically conservative.

## RÉSUMÉ

*Un sondage fut distribué aux étudiants d'une petite université canadienne (Bishop's University) afin de déterminer les facteurs déterminant les attitudes des étudiants envers l'homosexualité. Deux échelles d'attitudes (l'Indice d'homophobie et l'Échelle des attitudes envers les gais et lesbiennes) ont été appliquées à un échantillon d'étudiant de premier cycle (N=263), choisis parmi les facultés et selon les années de*

*scolarité universitaire. Les résultats obtenus selon ces échelles ont ensuite été mis en corrélation avec les variables démographiques suivantes: âge, sexe, programme d'étude et nombre d'années d'éducation universitaire. Ont également été évalués les effets de la religiosité, les pratiques religieuses, les attaches politiques, la langue maternelle, le lieu de résidence (sur le campus universitaire ou non), et les croyances quant aux causes de l'homosexualité. Vingt-quatre pourcent des participants ont été qualifiés d'homophobes de niveau faible ou élevé selon l'Indice d'homophobie. Dans les analyses à une variable, l'homophobie s'est avérée plus importante chez les étudiants de la Faculté d'administration et plus faible chez les étudiants de la Faculté des sciences humaines; de plus, les hommes étaient généralement plus homophobes que les femmes, surtout envers les hommes homosexuels. Toutefois, contrairement aux constatations antérieures, l'homophobie chez les étudiants universitaires augmentait avec le nombre d'années de scolarité. Cependant, dans une analyse à plusieurs variables, l'homophobie était associée ( $R = .58$ ) de façon significative aux étudiants mâles, francophones plutôt qu'anglophones, et conservateurs sur le plan politique.*

---

**A**lthough homosexuality was removed from the DSM list of disorders in 1973, and is generally regarded by scientists as a stable personality trait within the usual range of variation in sexual orientation (Garnets & Kimmel, 1991), some hostility to gay individuals is still evident in the educational system, even within the progressive North American culture (Pascoe, 2007).

Research in this area paints a discouraging picture for young homosexuals, with victimization frequently reported (Pilkington & D'Augelli, 1995). After controlling for age, race, sex, education and area of residence, homosexuals on average have been found to earn 24.4% less than heterosexuals (Badgett, 1996). Although the university has traditionally been seen as a liberalizing influence on attitudes (Newcomb, 1943), a survey of 121 gay or lesbian undergraduate students at Pennsylvania State University found that 77% had experienced verbal abuse after revealing their homosexuality (D'Augelli, 1992). In addition, 27% reported being threatened with violence. Typically, fellow students were the victimizers and the harassment went unreported.

The functional model of Herek (1984), which provides a theoretical context for the present study, argues that symbolic sexual attitudes are liable to conform to the larger ideology of an individual's reference groups. In this view persons who identify themselves as liberal and support the ideologies of individual freedom and social justice will have more positive attitudes towards homosexuality,

because this reinforces their self-concept. This would suggest that by increasing the amount of time spent in the campus milieu an individual's homophobia should decrease. However, the converse applies to those who identify themselves as fundamentalist Christians and attend church frequently: they will have more negative attitudes in line with the traditionally conservative religious bias towards homosexuality (Estrada & Weiss, 1999; Marsiglio, 1993). In both cases the symbolic sexual attitudes function to identify the individual with the reference group.

Since Kinsey's pioneering studies of sexuality (Kinsey, Pomeroy, & Martin, 1948), there has been considerable research concerning the correlates of homophobia, such as gender, age and race. One of the most consistent findings is that men are more likely to hold homophobic attitudes than women (Herek, 1988; Ben-Ari, 2001). Several other potentially important correlates of homophobia, however, have not been studied in detail. Surprisingly, there are few studies evaluating the importance of years of education (especially post-secondary education), and of the program of studies (Social sciences, Business, etc.) on homophobic attitudes. A recent survey of 364 students at a large Midwestern university found that upper-year students had more positive attitudes towards homosexuality than lower level students (Lambert, Ventura, Hall & Cluse-Tolar, 2006). This is consistent with the idea that education should not be limited to the acquisition of technical skills but should continue to foster social learning (Astin, 1993, 1997).

Only one study to our knowledge has looked specifically at attitudes towards homosexuals as a function of a student's choice as to program of study (Schellenberg, Hirt, & Sears, 1999). Conducted at the University of Windsor, a mid-size Canadian university, it showed that students in the Faculty of Arts and Social Science had a more positive attitude towards gay men than Science or Business students. These studies, however, were conducted at institutions of substantial size located within larger urban centers. In that sense, they cannot be said to be representative of the population as a whole or even to students in general.

The present study investigates the correlates of attitudes towards homosexuality in a small Canadian liberal arts college (Bishop's University), located in a semi-rural setting. Ideally the results could be compared directly to those from larger centers; however, Lambert, Ventura, Hall, & Cluse-Tolar (2006) did not employ a validated scale to measure homophobia, but used 19 questions relating to attitudes towards homosexuals, adopted from several studies. Schel-

lenberg, Hirt, & Sears (1999) did use a validated scale: Herek's (1988) Attitudes Toward Lesbians and Gay Men Scale – short form (ATLG). Herek's scale, although it lacks in specificity, serves an important function in this study as it allows for direct comparisons to be made with the work of Schellenberg, Hirt and Sears (1999).

Hudson and Ricketts (1980) view anti-gay responses as multi-dimensional, using the term *homonegativism*. One of these dimensions is "the responses of fear, disgust, anger, discomfort, and aversion that individuals experience in dealing with gay people" (Hudson & Ricketts, 1980, p.358), which they distinguish as homophobia. The ATLG scale measures the wider domain of homonegativism, while Hudson and Ricketts's scale is more focused on measuring homophobia. For this reason this study also uses their 25-item Index of Homophobia (IHP). Some differences between the two scales are expected, as they are designed to measure different aspects of homonegativism. Nonetheless, it was predicted that because the IHP and ATLG both measure attitudes towards homosexuality there should be a significant correlation between the two tests, supporting their validity as measures of attitudes towards homosexuality.

These two measures of attitudes towards homosexuality were correlated to years of education and program of study, and to the demographic variables of age, gender, living arrangements (resident on campus or not), religiosity and church attendance, and political party affiliation. Since Bishop's University also boasts a largely bilingual population, we also investigated the possible impact of the subjects' mother tongue (French or English). It would seem that this has never been formally investigated. It was expected that students whose mother tongue is French should be more tolerant than those whose mother tongue is English, reflecting the generally more liberal nature of French-Canadian culture as opposed to its English-Canadian counterpart (Conner, Richman, Wallace, & Tilquin, 1990).

There is some evidence that people who believe that homosexuality stems from genetic or biological causes rather than learned or social factors show less homophobia (Ernulf, Innala & Whitam, 1989). It was therefore expected that students with more years of education and students in selected programs of studies such as the Social or Natural sciences should also be more likely to believe this, and would show less homophobia. Indeed, the physiological bases of homophobia (e.g. Levay, 1991; Bailey and Pillard, 1991) are now well established within the scientific community.

Correlations of homophobia with subject variables were expected to conform to what has been found previously; that is, to be lower for older students, females and students having completed more years of education (Schellenberg et al., 1999). The impact of traditional religiosity and conservative political affiliations previously observed should also be seen here (Estrada & Weiss, 1999; Herek, 1984; Schellenberg et al., 1999).

Finally, we expected that the effect of program of studies observed in a large institution (Schellenberg, Hirt, & Sears, 1999) should hold, with the Social sciences and Arts showing less homophobia. However, we also predicted that homophobia as a whole would be considerably less than in that study. This was expected to be due to the passage of time (almost a decade) and the increasingly tolerant societal attitudes towards homosexuality today (Herek, 2006), as well as the nature of the small institution, where the focus on a Liberal Arts education and the importance placed on socialization should sensitize students to social issues.

## **Method**

### *Participants*

A sample of 263 Bishop's University undergraduate students (119 male and 144 female) signed a consent form and were asked to complete a survey. Participants were selected using a non-random, systematic convenience sampling design. They were drawn as a stratified sample from the five different divisions of study at the university: Natural Sciences, Business, Social Sciences, Humanities, and Education. The subjects were treated in accordance with the "Ethical Principles of Psychologists and Code of Conduct" (American Psychological Association, 1992). Participants were not categorized with respect to sexual orientation, due to ethical and methodological problems (false reports, bisexuality, relatively small homosexual sample, etc.). The sample should therefore contain approximately the same proportion of heterosexuals and homosexuals as the university population.

### *Materials*

Two scales of attitudes towards homosexuals were used. The first, Herek's (1988) Attitudes Toward Lesbians and Gay Men Scale - short form (ATLG) contains 10 statements, in two subscales; one measures attitudes towards male homosexuals, and the other attitudes towards female homosexuals. Statements such as "Female homosexuality is a sin" and "Homosexual behavior between two men is

just wrong” are rated on a 9-point scale: 1 (strongly disagree) to 9 (strongly agree). Scoring is reversed for positively worded items, yielding a score between 10 and 90, a high score indicating negative attitudes. This scale is reported to have satisfactory reliability, as well as construct and discriminant validity (Van de Meerendonk, Eisinga, & Felling, 2003).

Hudson and Ricketts’ (1980) Index of Homophobia (IHP) was also used. This 25-item questionnaire yields scores ranging from 0 to 100, high scores again indicating more homophobic attitudes. The authors report reliability of .90, as well as good content and factorial validity for this scale.

A demographic questionnaire was administered to record the subject’s age, gender, academic division of study, year of study, residence (on or off campus), maternal language, personal importance of religion, frequency of religious attendance, political affiliation, and belief in biological causes of homosexuality. The scales on the questionnaire were designed to allow comparison with previous studies (Lambert, Ventura, Hall, & Cluse-Tolar, 2006; Schellenberg, Hirt & Sears, 1999).

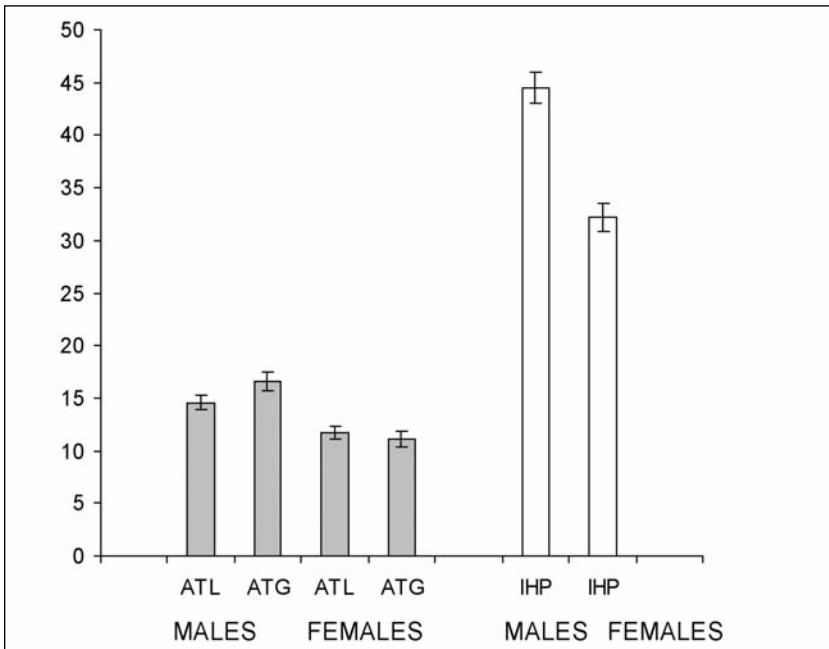


Figure 1. Homophobia shown by male and female subjects on the IHP and ATLG scales (ATL = attitudes towards lesbians; ATG = attitudes towards gays). Higher scores indicate more homophobic attitudes on either scale. Error bars represent SEMs.

### Procedure

The experimenter obtained the professors' permission to gain access for the first or last ten minutes of classes, and entered 14 classrooms, each of approximately 20 students in the five divisions of the university, obtaining responses from students in all four years of study. The nature of the study was explained and it was emphasized that the survey was entirely voluntary.

Those agreeing to complete the survey received a consent form and were asked to sign it. Names were recorded on the consent form but everything else was answered anonymously. After finishing the survey, the participants were asked to hand the researcher the consent form and survey, which were immediately placed in separate envelopes. Due to the sensitive subject matter, the researcher was careful in handling the data to preserve the subjects' confidentiality. Participants were assured that no names would appear in the data, which was to be seen only by the supervisors, and destroyed once the study was complete.

### Results

#### Overall Levels of Homophobia

On the IHP (Hudson and Ricketts, 1980), a score of 0 to 25 is classified as "high grade non-homophobic" attitude, 26 to 50 as "low grade non-homophobic", 51 to 75 as "low grade homophobic",

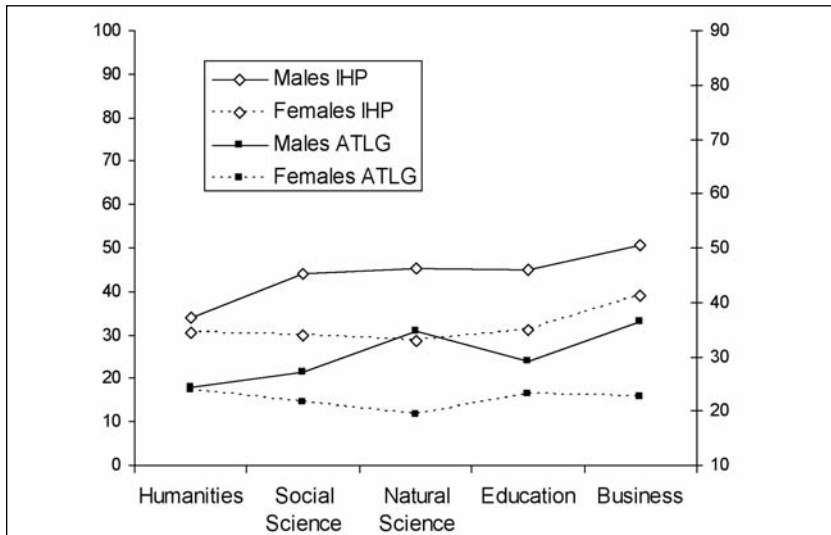


Figure 2. Homophobia as a function of subject's gender and academic division, on the IHP (scale range 0-100) and the ATLG (scale range 10-90).

and 76 to 100 as “high grade homophobic.” For the present sample 25.5, 50.9, 22, and 1.5 percent of respondents respectively fell into these four categories.

### *Categorical Predictors of Homophobia*

**Gender.** A  $2 \times (2)$  mixed ANOVA (subject gender  $\times$  attitude subscale) was conducted on the ATLG scores to compare the level of homophobia of male and female subjects, towards male and female targets. Males showed more negative attitudes towards homosexuality overall than did females,  $F(1, 246) = 20.1, p = .001$ . A Subject Gender  $\times$  Target Gender interaction indicated that female students held similar attitudes towards lesbians and gay men, whereas males were more negative in attitudes towards gay men than lesbians,  $F(1, 246) = 9.74, p = .002$ . These data are shown in Figure 1.

A one-way ANOVA of IHP scores also showed that males ( $M = 44.50$ ) showed higher levels of homophobia than females ( $M = 32.22$ ),  $F(1, 261) = 39.73, p = .001$ .

Variable	Mean	SD	r(ATLG)	r(IHP)
<b>Gender</b> (1= Male, 2 = Female)	M=45%	F=55%	-.281**	-.363**
<b>Age in years</b>	21.53	3.82	.163*	.127*
<b>Years of education</b>	3.29	1.62	.164*	.103
<b>Live in Residence</b> (1 = yes, 2 = no)	31%	.464	.152*	.122*
<b>Importance of religion</b> (1 = great deal, 4 = not much at all)	3.10	1.00	-.317**	-.137*
<b>Religious attendance</b> (1= > once week, 5 = almost never)	4.37	1.02	-.349**	-.136*
<b>Political affiliation</b> (1= liberal, 4 = neutral, 7 = conservative)	3.00	1.49	.375**	.437**
<b>Belief in biological cause</b> (1 = not at all, 7 = very much)	4.01	1.73	-.199	-.166
<i>(n = 258–263)</i>				
** $p < .01$ (2-tailed)				
* $p < .05$ (2-tailed)				

Table 1

Mean responses on the survey variables, with correlations to ATLG and IHP scores



*Residence.* The students living in university residences showed less homophobia than those who lived off campus,  $t(246) = 2.42$ ,  $p = .016$  for the ATLG, and  $t(261) = 1.98$ ,  $p = .049$  for the IHP.

*Language.* Seventy-three percent of the respondents' mother tongue was English, with 20% French, and 7% other. Those rated as "other" were excluded from analysis as the group was too small and variable to establish any conclusions. Anglophone students held less homophobic attitudes than Francophone students,  $t(229) = 4.59$ ,  $p = .0001$  for the ATLG, and  $t(239) = 3.61$ ,  $p = .0001$  for the IHP.

*Division.* Levels of homophobia were compared across the five divisions of study at the university, by means of a  $5 \times 2$  ANOVA for each homophobia scale. Using the IHP, homophobic attitudes varied across the divisions, being highest among Business students and lowest in Humanities students,  $F(4, 253) = 5.36$ ,  $p = .001$ . Business students were significantly higher than all other divisions according to the Tukey HSD test,  $p < .05$ . With the ATLG, the divisions were not shown to differ in homophobia towards lesbians,  $F(4, 240) = 0.98$ ,  $p = .42$ , or towards gays,  $F(4, 248) = 1.8$ ,  $p = .13$ . There was no significant interaction between division and gender, for either scale. The means are shown in Figure 2.

*Years of post-secondary education.* One-way ANOVAs indicated that those subjects having more years of post-secondary education were more homophobic on the ATLG,  $F(14, 230) = 1.81$ ,  $p = .038$ , but not on the IHP,  $F(14, 245) = 1.34$ ,  $p = .18$ . Likewise the positive correlation between education and homophobia was also significant when using ATLG scores,  $r(245) = .164$ ,  $p = .01$ , but not with IHP scores,  $r(260) = .103$ ,  $p = .097$ .

### *Bivariate Correlations*

Means, standard deviations and standard errors for the variables used for correlation analysis are shown in Table 1, together with the correlations of these variables with IHP and ATLG scores. The subjects' IHP and ATLG scores were positively correlated,  $r(248) = .64$ ,  $p = .001$ , suggesting that these scales are reliable measures of homophobia. The two subscales of the ATLG also showed a strong correlation to each other,  $r(248) = .89$ ,  $p = .001$ .

*Importance of religion.* Approximately 8% of respondents indicated that religion played a great role in their lives, 21% rated it at a fair amount, 24% indicated not much, and 47% marked not at all. The more religious subjects showed more negative attitudes towards homosexuality,  $r(247) = .317$ ,  $p = .0001$  for ATLG scores, and  $r(262) = .137$ ,  $p = .027$  for IHP scores.

*Frequency of church/religious attendance.* Two percent of respondents indicated that they attended religious services more than once a week, 5% marked once a week, 11% indicated 2 or 3 times a month, 17% marked once a month, and 65% marked almost never. It was found that the individuals who attended church more frequently were more homophobic,  $r(246) = .349, p = .0001$  for the ATLG, and  $r(261) = .136, p = .028$  for the IHP.

*Political affiliation.* Measured on a 7 point Likert scale, liberals formed 65% of the sample below the neutral point, 23% were neutral, and only 14% were conservative. It was found that subjects with a more liberal political affiliation had more positive attitudes towards homosexuality,  $r(257) = .437, p = .0001$  for the IHP.

*Belief in biological causes of homosexuality.* There was no significant correlation between belief in the biological causes of homosexuality, measured on a 7 point Likert scale, and IHP scores,  $r(261) = -.116, p = .061$ .

*Age.* It was found that older students were more homophobic than younger students,  $r(262) = .127, p = 0.04$  on the IHP, and  $r(248) = .163, p = .01$  on the ATLG. Although significant, the association is not large, possibly due to the restricted age range involved.

#### *Multivariate prediction of homophobia.*

A backward multiple linear regression analysis of IHP scores was performed. It employed the subject's division as a dummy-coded variable, established on the basis of its mean level of homophobia (Humanities = 1, Social Sciences = 2, Natural Sciences = 3, Education = 4, Business = 5). This analysis showed that IHP scores could be predicted with fair accuracy ( $R = .581$ ) from the following three subject characteristics taken together: male gender, francophone language group, and political conservatism, with respective beta weights of .29, .26, and .38 (all  $p < .001$ ). However, the addition of the other seven subject variables from the survey as predictors (all  $p > .1$ ) increased the value of  $R$  only negligibly, to .598.

### **Discussion**

Confirming previous findings (Logan, 1996; Davies, 2004), the results indicate that males overall were consistently higher in negative attitudes towards homosexuality than females, and showed an anti-gay bias which was absent from the female respondents. However, the absolute levels of homophobia appear relatively low in comparison to poll data for the general population, since 49% of all Canadians believe that homosexuality is abnormal, as compared to 46% who

think the opposite (Leger Marketing, 2005, p.17). This presumably reflects the generally liberal mores on a university campus.

As expected, age, gender, importance of religion, church attendance and political party affiliation, when considered individually, were all correlated to homophobia, as in past studies (Ben-Ari, 2001; Estrada & Weiss, 1999; Herek, 1984; Herek, 1988; Lambert et al., 2006; Schellenberg et al., 1999). However, two factors did not correlate with homophobia as predicted. The first was belief in biological causes of homosexuality. A number of studies have found that those who believe homosexuality to be due to genetic causes are less homophobic (Herek, 1984; Ernulf, Innala & Whitmam, 1989). It is apparent that participants often see homosexuality not as a choice but a biological product in these cases. The results of the present study, however, did not find significant results for this factor, perhaps because the assessment tool involved a single question.

Secondly, a surprising finding was that maternal tongue French students were more negative towards homosexuality than maternal tongue English students, contradicting our predictions. It may be that Bishop's University attracts French students from more traditional homes, and from rural areas rather than from metropolitan areas where feelings towards homosexuality are generally more liberal.

If we examine the two scales, the first critique of Herek's (1988) ATLG scale is that it is outdated. Most notable is question 2 of the scale, which states "Laws regulating private, consenting lesbian behavior should be loosened", since after the construction of this scale in 1988 laws restricting homosexual behavior have been abolished in both the United States and Canada, making this question moot. This critique is confirmed by Ernulf, Innala and Whitam (1989), who removed this question from the ATLG scale because it was not applicable to the Swedish society they were studying. The second critique is that the scale is too ambiguous. The item of note is question 4 in the scale: "Female homosexuality in itself is no problem, but what society makes of it can be a problem". A few participants did not answer this question and some wrote comments on the survey saying they did not understand what the question meant. A third explanation for the varying results between the two scales may be based on past work. It was presumed in selecting the scales for the study that Herek's (1988) scale measured a wider domain of homonegativity, while Hudson and Ricketts's (1980) was more precise in measuring homophobia. Although they may

measure different facets of homonegativism, they are both measures of attitudes towards homosexuality and should correlate with one another. When the IHP was compared with the ATLG there was a significant correlation (.64), confirming our convergent predictions.

Concerning the relation of the subjects' faculty to homophobic attitude, our results at a small university and Schellenberg et al.'s (1999) study at a large university are consistent. Hopwood and Connors (2002) have also reported that Business students show the highest level of homophobia. It may be argued that male students, especially, could be encouraged to enroll in classes involving gender analysis, such as Women's Studies classes or courses on general human sexuality, which produce increased acknowledgement of diversity and foster more positive attitudes towards homosexuality (Macalister, 1999; Larsen, Cate & Reed, 1983). This would uphold the tradition of universities playing an instrumental role in shaping a progressive culture and society (Schellenberg, Hirt & Sears, 1999; Macalister, 1999; Greenwood, North & Dollenmayer, 1999).

It was predicted that years of education would confirm the previous finding that as students pass through the years of higher education they become more liberal and homophobia decreases (Lambert, Ventura, Hall, & Cluse-Tolar, 2006). Indeed we would like to believe that higher education leads to citizens who are more tolerant and open-minded. However, the univariate analysis showed a significant positive finding, at first glance suggesting that higher education actually increases negative attitudes towards homosexuality. There are several possible explanations for this seemingly aberrant result. First, it was thought in the construction of the survey that the most accurate measure of education would be in years of post-secondary education as opposed to years in college. Bishop's University is in an unusual situation in that it has a large population of students who enter its degree program in the second year of study. This is due to the Québec system of junior colleges (CEGEPs), where students who finish high school in grade 11 spend two years, and begins university in the 2<sup>nd</sup> year of a four-year program. This is why university year was thought to be a suitable measure of education in this school's unique situation. However it did not take into account whether English students were coming from Québec or out of province. Most of the French students surveyed originate from Québec and thus had passed through the CEGEP system, allowing the survey to be biased by sampling French stu-

dents only in their 3<sup>rd</sup> year of study. Future research should correct the question of years of post-secondary education, by asking for additional information such as whether participants are from the province and if so how many years of CEGEP they have attended. There were also a number of outliers which skewed the distribution. These may have been adults returning to school after an extended break or perpetual students who may be older and more educated but who also show a cohort effect for homophobia. This would be congruent with previous findings that older cohorts are more homophobic than younger ones (Herek, 1984). A final explanation is that the range of educational level is restricted, since only university students participated.

When compared to a large Canadian university (Schellenberg et al., 1999), the Bishop's University community appears to have an overall more positive attitude towards sexual diversity. Two possible explanations arise for this. The first is that in the ten years since the collection of these data, societal views towards sexual diversity have become more accepting. The second is that Bishop's University's small size facilitates socialization and a reduction in prejudiced views towards homosexuality.

The fairly low level of homophobia at Bishop's suggests tolerance, perhaps promoted by its small size, which facilitates socialization and a closer-knit community. As students encounter a larger diversity of colleagues, some of whom will be gay or lesbian, this presumably leads to a reduction in prejudiced views towards homosexuals, in accordance with the contact hypothesis (Herek, 1993). This would agree with the results which, at least in the univariate analysis, suggested that students in residence are less homophobic than those living off campus.

We are presently involved in a follow-up study looking at the factors modulating attitudes towards homosexuality in the wider community of the Eastern Townships region. Surprisingly, few studies have looked at this issue outside of large urban centers. We are hopeful that the present study and its follow-up will help to dispel the myth that metropolitan dwellers are more open-minded and more tolerant than their counterparts in smaller centers.

## REFERENCES

- American Psychological Association. (1992). Ethical principles of psychologists and code of conduct. *American Psychologist*, *47*, 1597–1611.
- Astin, A. (1993). *What matters in college? Four critical years revisited*. San Francisco: Jossey-Bass.
- Astin, A. (1977). *Four Critical Years: Effects of college on beliefs, attitudes and knowledge*. San Francisco: Jossey-Bass.
- Badgett, M.V. (1996). Employment and sexual orientation: disclosure and discrimination in the workplace. *Journal of Gay & Lesbian Social Services*, *4*(4), 29-52.
- Bailey, J.M., & Pillard, R. C. (1991). A genetic study of male sexual orientation. *Archives of General Psychiatry*, *48*(12), 1089–1096.
- Ben-Ari, A.T. (2001). Homosexuality and heterosexism: views from academics in the helping professions. *British Journal of Social Work*, *31*, 119–131.
- Conner, G., Richman, C.L., Wallace, S., & Tilquin, C. (1990). AIDS Knowledge and homophobia among French and American university students. *Psychological Reports*, *67*(3), 1147–1152.
- Davies, M. (2004). Correlates of negative attitudes toward gay men: sexism, male role norms, and male sexuality. *The Journal of Sex Research*, *41*(3), 259-266.
- D'Augelli, A.R. (1992). Lesbian and gay male undergraduates' experiences of harassment and fear on campus. *Journal of Interpersonal Violence*, *7*(3), 383–395.
- Ernulf, K.E., Innala, S.M., & Whitam, F. L. (1989). Biological explanation, psychological explanation, and tolerance of homosexuality: cross-national analysis of beliefs and attitudes. *Psychological Reports*, *65*(3), 1003–1010.
- Estrada, A., & Weiss, D. (1999). Attitudes of military personnel toward homosexuals. *Journal of Homosexuality*, *37*(4), 83–97.
- Garnets, L. & Kimmel, D. (1991). Lesbian and gay male dimensions in the psychological study of human diversity. In D. Coon (Ed.), *Essentials of psychology: exploration and application* (p. 595). Belmont, CA: Wadsworth.
- Greenwood, M.R.C., North, K. K., Dollenmayer, J. (1999). Whose millennium? The university as a medium of culture. *American Behavioral Scientist*. *42*(6), 1041–1051.
- Herek, G.M. (1984). Beyond 'homophobia': a social psychological perspective on attitudes toward lesbians and gay men. *Journal of Homosexuality*, *10*(1-2), 451–477.

- Herek, G.M. (1988). Heterosexuals' attitudes towards lesbian and gay men: Correlates and gender differences. *Journal of Sex Research, 25*, 451–477.
- Herek, G.M. (1993). Interpersonal contact and heterosexuals' attitudes towards gay men: Results from a national survey. *Journal of Sex Research, 30*, 239–244.
- Herek, G.M. (2006). Legal recognition of same-sex relationships in the United States: a social science perspective. *American Psychologist, 61*(6), 607–621.
- Hopwood, M., & Connors, J. (2002). Heterosexual attitudes to homosexuality: Homophobia at a rural Australian university. *Journal of Gay & Lesbian Social Services: Issues in Practice, Policy & Research, 14*(2), 79–94.
- Hudson, W.W., Ricketts, W. A. (1980). A strategy for the measurement of homophobia. *Journal of Homosexuality, 5*, 357–372.
- Kinsey, A.V., Pomeroy, W.B., & Martin, C.E. (1948). *Sexual behavior in the human male*. Philadelphia: Saunders.
- Lambert, E.G., Ventura, L. A., Hall, D. E., & Cluse-Tolar, T. (2006). College students' views on gay and lesbian issues: Does education make a difference? *Journal of Homosexuality, 50*(4), 1–30.
- Larsen, K.S., Cate, R., & Reed, M. (1983). Anti-black attitudes, religious orthodoxy, permissiveness, and sexual information: a study of the attitudes of heterosexuals toward homosexuality. *The Journal of Sex Research, 19*(2), 105–118.
- Leger Marketing (2005). *Perceptions and opinions of Canadians regarding homosexual people*. Retrieved June 1, 2007, from [http://www.homophobiaday.org/utilisateur/documents/homophobia/pdf/survey\\_2005.pdf](http://www.homophobiaday.org/utilisateur/documents/homophobia/pdf/survey_2005.pdf).
- LeVay, S. (1991). A difference in hypothalamic structure between heterosexual and homosexual men. *Science, 253*, 1034–1037.
- Logan, C.R. (1996). Homophobia? No, homoprejudice. *Journal of Homosexuality, 31*(3), 31–53.
- Macalister, H.E. (1999). Women's studies classes and their influence on student development. *Adolescence, 34*(134), 283–292.
- Marsiglio, W. (1993). Attitudes toward homosexual activity and gays as friends: a national survey of heterosexual 15- to 19-year-old males. *Journal of Sex Research, 30*(1), 12–17.
- Newcomb, T.M. (1943). *Personality and social change: Attitude formation in a student community*. Ft Worth, TX: Dryden Press.
- Pascoe, C.J. (2007). 'Dude, you're a fag'. *Inside Higher Education, June 28*. Retrieved June 29, 2007, from <http://insidehighered.com/layout/set/print/views/2007/06/28/pascoe>.

- Pilkington, N.W. & D'Augelli, A.R. (1995). Victimization of lesbian, gay, and bisexual youth in community settings. *Journal of Community Psychology, 23*(1), 34–56.
- Schellenberg, E.G., Hirt, J., & Sears, A. (1999). Attitudes toward homosexuals among students at a Canadian university. *Sex Roles, 40*, 139–152.
- Van de Meerendonk, B., Eisinga, R., & Felling, A. (2003). Application of Herek's Attitudes Toward Lesbians and Gay Men Scale. *Psychological Reports, 93*, 265–275.