

DOCUMENT RESUME

ED 297 226

CG 021 000

**AUTHOR** Gattiker, Urs E.  
**TITLE** Western Canada and the Western United States: Similarities and Differences in Organizational Commitment.  
**SPONS AGENCY** Lethbridge Univ. (Alberta).  
**PUB DATE** 88  
**NOTE** 42p.  
**PUB TYPE** Reports - Research/Technical (143)

**EDRS PRICE** MF01/PC02 Plus Postage.  
**DESCRIPTORS** \*Administrators; \*Cross Cultural Studies; \*Employee Attitudes; Employer Employee Relationship; \*Employment Level; Foreign Countries; \*Income; \*Sex Differences; Work Attitudes  
**IDENTIFIERS** Canada; Organizational Commitment; United States

**ABSTRACT**

This study examined how factors such as income, gender, and hierarchical level help to determine employee's level of attitudinal and behavioral commitment to their employers in the United States and Canada. Employers at 28 Canadian firms and 15 U.S. firms were asked to choose female respondents and match them with male respondents in positions of similar job complexity and responsibility. Subjects chosen were managers with supervisory, budget, hiring, and other such responsibilities. The final sample of 306 Canadian and 157 U.S. respondents completed the Organizational Commitment Questionnaire. While cross-cultural differences were found to be limited, intra-cultural differences in behavioral commitment were apparent between subgroups within the individual countries. Data indicated that behavioral commitment based on gender differed in both countries, while income and hierarchical effects resulted in differences in behavioral commitment between groups only in Canada. The only significant difference between the countries was found in the respondents' level of behavioral commitment for high income earners. Since attitudinal commitment was apparently not affected by gender, income, hierarchical level, and inequality, it can be concluded that considering this dimension in studies of this type is pointless. (Author/NB)

\*\*\*\*\*  
 \* Reproductions supplied by EDRS are the best that can be made \*  
 \* from the original document. \*  
 \*\*\*\*\*

ED 297226

File: Commit.dat  
Disk: Tech 85 #6 and Editor 2  
Sub-Directory: \commit and n/a

WESTERN CANADA AND THE WESTERN UNITED STATES:  
SIMILARITIES AND DIFFERENCES IN ORGANIZATIONAL COMMITMENT<sup>1</sup>

Urs E. Gattiker

The University of Lethbridge  
Lethbridge, Alberta, Canada

Short Title: Organizational Commitment

CG 021000

U.S. DEPARTMENT OF EDUCATION  
Office of Educational Research and Improvement  
EDUCATIONAL RESOURCES INFORMATION  
CENTER (ERIC)

- This document has been reproduced as received from the person or organization originating it.
- Minor changes have been made to improve reproduction quality.

\* Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

*Urs E. Gattiker*

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

BEST COPY AVAILABLE

<sup>1</sup>The author would like to thank Larry Coe and Todd Nelligan for their assistance in collecting and analyzing the data. Cynthia Cunningham, Valorie Hoyer and Larry Steinbrenner provided valuable editorial assistance in the preparation of this manuscript. Financial support for this research project was in part provided by The University of Lethbridge Research Fund, under Contract No. 86-1934-405, and by a grant from the Alberta Manpower "STEP" Program, Contract No. 11149. The views expressed in this paper are the author's own and are not necessarily shared by these organizations. Comments should be addressed to Urs. E. Gattiker, School of Management, The University of Lethbridge, Lethbridge, Alberta, T1K 3M4, Canada.

WESTERN CANADA AND THE WESTERN UNITED STATES:  
SIMILARITIES AND DIFFERENCES IN  
ORGANIZATIONAL COMMITMENT

Abstract

This study examines how factors such as income, gender and hierarchical level help to determine employees' levels of attitudinal and behavioural commitment to their employers in the U.S. and Canada. While cross-cultural differences were found to be limited, intra-cultural differences in behavioural commitment were apparent between sub-groups within the individual countries. Data indicated that behavioural commitment based on gender differed in both countries, while income and hierarchical effects result in differences in behavioural commitment between groups in Canada only. The only significant difference between the countries was found in the respondents' level of behavioural commitment for high income earners. Since attitudinal commitment was apparently not affected by gender, income, hierarchical level and inequality, it is concluded that considering this dimension in studies of this type is pointless. Considerations for future research are discussed.

WESTERN CANADA AND THE WESTERN UNITED STATES:  
SIMILARITIES AND DIFFERENCES IN ORGANIZATIONAL COMMITMENT

Despite one of the basic tenets of the society in which we live, it is an inescapable fact that all human beings are not equals. We are unequal in many ways--in the rights that we can pretend to have, in the work that we do, and in the ways in which we are rewarded for that work. In an organizational context inequality can have a tremendous impact upon the work of the employees who perceive it, and the possibility that inequality based on factors such as gender, hierarchical level or income might affect organizational commitment (Luthans, McCaul & Dodd, 1985) means that administration cannot afford to be ignorant of research in this area.

Organizational commitment, unlike satisfaction, is a relatively stable employee attitude, and can be defined as a strong belief in and acceptance of the organization's goals and values, a willingness to exert considerable effort on behalf of the firm, and a strong desire to remain in the organization (Porter, Steers, Mowday & Boulian, 1974). In this study, we are primarily concerned with examining two dimensions of organizational commitment that have been identified in organizational research: attitudinal commitment and behavioural commitment (Steers & Porter, 1983, pp. 425-430). While the former is based on the extent to which an employee identifies with a firm by accepting its goals and values, the latter reflects the employee's feeling of being bound to the organization by benefits which he or she cannot afford to give

up. The relationship between these two dimensions of commitment is not well-defined, yet most commitment research seems to ignore this fact and assume--without evidence--that it is cumulative; that is to say, most research seems to assume that a certain level of attitudinal commitment can be added to a certain level of behavioural commitment to result in a greater level of overall organizational commitment. This may not be the case, however, and the relationship between the two dimensions may in fact be quite different, a possibility reflected in O'Reilly and Chatman's (1986) suggestions that they be studied separately and that the results of any commitment research that does not do this may be questionable. The only thing that can be assumed about this relationship is that, since behavioural and attitudinal commitment are both dimensions of organization commitment, they must both have at least some effect upon it. This study will therefore operate within the parameters defined by these limitations.

In order to study the effects of inequality on attitudinal and behavioural commitment, this paper will examine differences and similarities among work organizations in parts of the United States and Canada which should reflect inequalities within these organizations. According to Triandis and Vassiliou (1972), these differences and similarities among organizations fall under the subjective culture system. A given employee's attitudinal and behavioural commitment depends upon the subjective culture of the group, which can be defined as the group's characteristic way of perceiving its social environment and which is largely the product of the group's demographics. This implies an objective

culture defined by how outsiders view the same environment--the sense in which we should understand this term when it arises later in the text. Since different groups of office workers, like managers or secretaries, have different demographics, we can expect them to have different subjective cultures, and research supports this by finding indications that specific groups of office workers may have different expectations, values, and beliefs about work than others (e.g., Brousseau, 1983).

Adler (1983) has said that the international scope of modern business demands that management research, if it is to remain relevant, not confine itself to purely domestic perspectives. Unfortunately, past organizational commitment research that has tried to keep an international perspective has tended to concentrate exclusively on countries with radically different objective and subjective cultures, such as the U.S. and Japan (e.g., Luthans et al., 1985), to the detriment of countries with similar objective cultures, such as the U.S. and Canada. In light of impending free-trade, however, possible cross-cultural differences in attitudinal and behavioural organizational commitment between these latter two countries should be of even greater concern to organizations operating within them than they have been in the past, and cross-cultural research investigating the two countries should be a priority. On the other hand, there are those who do not feel that the current emphasis on cross-cultural study is necessarily the best direction for future research, and who propose instead that future research into the cultural phenomenon should concentrate on intra-cultural differences before investigating cross-cultural ones (Bhagat &

McQuaid, 1982). In this study, we attempt to find a happy medium and test for both cross-cultural and intra-cultural differences in attitudinal and behavioural commitment, for the simple reason that, in two countries as apparently similar as Canada and the U.S., testing for intra-cultural differences may reveal actual disparities that the grosser measures used to test for cross-cultural differences do not. Since Canadians and Americans are generally assumed to be similar in their work values, as research has demonstrated (Griffeth, Hom, DeNisi & Kirchner, 1985), a noticeable difference in approaches to attitudinal and behavioural commitment should be indicative of differing subjective cultures.

### Literature Review

#### Extrinsic Justification and Attitudes

Before we begin our actual examination of the relationship between inequality and organizational commitment, it seems necessary to explain a phenomenon that has a significant effect upon this relationship, and which therefore cannot be ignored. The insufficient justification hypothesis, proposed by Pfeffer and Lawler (1980), states that if an extrinsic justification factor--a justification factor being something that an individual uses to rationalize his or her behaviour in a given circumstance--such as income is insufficient, an individual's behavioural commitment to his or her employer will decrease. That is to say, if an individual feels that he or she is not being paid enough, he or she will not have the incentive to "justify" his or her commitment to a job that seems unattractive in the first place. The data Pfeffer and Lawler received in

their study, which used long-term academic employees, confirmed this hypothesis. Surveying newly hired MBA's, O'Reilly and Caldwell (1981) found that behavioural commitment levels were affected by other job opportunities, indicating that when extrinsic justification is insufficient, a lack of other opportunities may in itself result in a high degree of commitment from an employee.

Because behavioural commitment involves a loss of self-determination--in contrast to attitudinal commitment, which theoretically involves the concept of free will (cf. Porac & Meindl, 1982)--the individual who is thus committed to an organization may feel "locked in". The resulting feeling of helplessness may undermine the justification process. Some researchers have indirectly suggested that a perceived ability to make choices (whether it is real or not) leads to higher levels of attitudinal commitment from employees than may be expected from employees who feel that they have no freedom of choice and whose commitment is behavioural (cf. Morrow, 1983; Mowday, Stears & Porter, 1979). We can conclude from this that an employee whose commitment is more behavioural than attitudinal will not likely be as satisfied with similar rewards, a situation that will affect the employee's perceptions of inequality.

#### Organizational Commitment Antecedents and Organizational Inequality

Research has investigated possible antecedents of organizational commitment, which have been examined in what Weiner (1982) has characterized as three groups of studies. The first group relates personal-demographic variables to commitment,

the second relates organizational characteristics and relationships to commitment, and the final group makes use of a person-organization "fit" approach; i.e., when a fit exists, organizational commitment is enhanced. This study attempts to incorporate elements from all of these different courses of study by investigating the influence of both personal-demographic and situational variables on levels of organizational commitment. Gender and hierarchical level have been found to be among the most important of demographic antecedents of organizational commitment (e.g., Angle & Perry, 1981; Hrebiniak & Alutto, 1972), while income has been found to be the most important of the situational variables (Luthans, Baack, & Taylor, 1987).

The variables that are the antecedents of commitment are also the antecedents of inequality, and inequality based on situational factors like gender and hierarchical level is well documented. Researchers have found that American women tend to hold disproportionately lower positions than American men and earn an average of only sixty cents for every dollar that their male peers receive (Blau & Ferber, 1985); a similar situation exists in Canada (Labour Canada, 1985). Kemp and Beck (1986), in a study comparing women and men doing equivalent work, found that women had lower average salaries than men (using the U.S. Department of Labor's Dictionary of Occupational Titles (DOT) to determine which jobs were equivalent).

The insufficient justification hypothesis leads us to believe that inequality will have a definite effect upon behavioural commitment and will cause different groups to feel different levels of behavioural commitment to the firm. All

things being equal, lower income individuals should be less behaviourally committed than higher paid individuals within a given organization. An underpaid female manager, for example, might be expected to feel less loyalty to her employers than a well-paid male manager. The effects of inequality upon attitudinal commitment are less certain, however, because the employee's identification with the organization's values and goals is not as easy to predict as behavioural commitment often is. Many long-term employees' attitudinal commitment will be relatively unaffected by inequality because they have become socialized. Simply put, socialization is the long-term process through which the employee eventually comes to accept the firm's attitudes and values (Larwood, 1984, p. 210). Some individuals, naturally, will accept these values and attitudes from the day they begin working for the organization, and will accept the status quo (since it reflects these very attitudes and values) and the inequalities that are part of it. Employees who do not identify with an organization's values and attitudes, however, will often find themselves at odds with the system. If this goes on for any length of time, the employee will likely either be dismissed or voluntarily leave to seek employment elsewhere (Sheridan, 1985). However, if the employee is behaviourally committed to the organization for a long period of time, the strain of being in constant conflict with his or her employers will probably lead to his or her unconscious socialization, which is to say that the employee may, for sanity's sake, eventually come to accept some or all of the organization's values and attitudes as his or her own, including policies of inequality

(see also Sheridan, 1985). A sort of retroactive justification process can also occur, in which the individual, faced with inequality, evinces commitment to a situation independent of objective reality (e.g., Porac & Meindl, 1982; O'Reilly & Caldwell, 1981). This self-defense mechanism may prevent feelings of failure and may contribute to higher levels of commitment from the individual than an objective observer might expect.

The degree to which any individual might be socialized can vary, however, and a given employee might be socialized to a point that stops short of agreeing with an organizational policy of inequality. There will also be relatively new employees who will not feel any sort of attitudinal commitment and mavericks who "stick to their guns" and refuse to adapt their own value systems while somehow remaining able to function efficiently within the organization. Because of these variables, attitudinal commitment levels will likely not appear to differ across the same groups that behavioural commitment levels differ across, because each of these groups--which are defined by the criteria discussed in this study (e.g., income, hierarchical level, and gender)--will tend to be made up of random numbers of individuals holding the various positions discussed above.

Hierarchical level and income. While Bruning and Snyder (1983) found hierarchical effects on organizational commitment to be minimal, Luthans et al., (1985) and Salancik (1977) did indeed find managers to be more committed than support personnel. Unfortunately, these studies did not distinguish between behavioural and attitudinal commitment when comparing managers

with support personnel, so we have no way of determining which dimension most influenced this overall commitment.

High income is not necessarily synonymous with high hierarchical level: though it can be reasonably assumed that managers will usually have higher incomes than support personnel, this may not be true in all circumstances. Certain types of staff specialists, like in-house corporate lawyers, may draw higher incomes than many managers--a trend that is becoming increasingly common. We must therefore inquire into the effects of income on levels of behavioural and attitudinal commitment separately from the effects of hierarchical level. Unfortunately, to our best knowledge there does not exist research which addresses this issue.

While the justification paradigm can be used to argue that high-paid support staff should feel more behaviourally committed to the firm than lower paid support staff--since, as O'Reilly and Caldwell (1981) found, they tend to lose more upon leaving the firm--it can also be argued that if one factor a manager might use to justify his or her commitment were viewed as insufficient (e.g., income) it could undermine the influence of another (e.g., position) (Porac & Salancik, 1981). Based on this reasoning, then, it is possible that the manager might exhibit a level of behavioural commitment similar to that exhibited by lower level employees. Since the sample used in this study was made up of random numbers of individuals holding both high and low-paid positions in both high and low levels of the hierarchy, whether or the levels of behavioural commitment that characterize

the different hierarchical levels examined will differ is uncertain

Attitudinal commitment, we have already noted, is unlikely to be dependent upon hierarchical level, except in the sense that higher level employees usually have more say in who they work for and are therefore statistically more likely to use self-selection mechanisms to choose employers with similar values (e.g., Brousseau, 1983). Since the socialization process will eventually offset the effects of this, we should not expect to find great differences in the attitudinal commitment of such diverse groups as executives and janitors.

Gender effects. Based on the justification hypothesis, female respondents who receive wages that are not equal to those paid to their male counterparts should experience lower levels of behavioural commitment (cf. O'Reilly & Caldwell, 1981). Bruning and Snyder (1983), however, found no pervasive differences between the sexes in terms of overall commitment, and Crosby (1982, chap. 4) found that discrimination of women at work did not lead to gender-based differences in job attitudes. These rather surprising discoveries might be partially explainable in the following way: women may feel attitudinally committed to the organization for any of the reasons previously discussed while still feeling less behaviourally committed to the organization than men because their salaries are lower. However, since the relationship between the two dimensions of commitment may not simply be cumulative (as was explained earlier), a difference in behavioural commitment might not appear to affect overall levels of commitment. Because Bruning and Snyder did not differentiate

between attitudinal and behavioural commitment, we cannot be certain that levels of commitment between women and men are as similar as they seem. And since job attitudes, such as job satisfaction, are usually far less stable than organizational commitment, Crosby's study may not necessarily reflect the long-term attitudes of female respondents.

#### Research Issues

As the preceding survey of the relevant commitment research literature seems to indicate, the bias of research towards examining the relationships between income, gender and hierarchical level-based inequalities and overall commitment has caused it to ignore the relationships between these factors and the dimensions of attitudinal and behavioural commitment--relationships that, for reasons that have already been discussed, are more likely to provide insights into organizational commitment. This survey has also given us good reason to suspect that the effects of inequalities upon attitudinal and behavioural commitment may not be similar, and that behavioural commitment may be more drastically affected than attitudinal commitment by inequality keyed on the variables used here. As we will recall from the introduction, different subjective cultures might also affect the inequality/ commitment relationship. The research questions given below, therefore, were asked in an attempt to discover exactly how these dimensions of commitment are affected by inequality.

Question 1. Are a disproportionate number of female respondents in varying hierarchical levels more likely to draw lower incomes?

Question 2. Does higher income lead individuals to assess their a) attitudinal and b) behavioural commitment more positively (in both Canada and the U.S.)?

Question 3. Does higher hierarchical level lead individuals to assess their a) attitudinal and b) behavioural organizational commitment more positively (in both Canada and the U.S.)?

Question 4. Does gender affect how individuals perceive a) attitudinal and b) behavioural organizational commitment (in both Canada and the U.S.)?

Question 5. a) Do Canadian respondents differ from their American counterparts in attitudinal and/or behavioural organizational commitment? b) Are intra-cultural differences in attitudinal and/or behavioural commitment within these two countries apparent?

#### Method

##### Design and Subjects

To facilitate the comparison between men and women, managers (male and female) were asked to first choose female respondents and then match them with male participants in positions of similar job complexity and responsibility. Female respondents were selected first because it is generally more difficult to find women in higher positions; once they are found, however, it is a relatively simple task to match them with men. Firms were also asked to select managers with supervisory, budget, hiring, and other such responsibilities, towards the end of eliminating respondents who were managers in name but not necessarily in

practice. This procedure insured that women and men with similar job duties were chosen as respondents, and avoided the problems inherent in the DOT, which, according to Kemp and Beck (1986), often presents an inaccurate reflection of reality. A fringe benefit was that this method allowed a comparison of the salaries of individuals doing similar work and let us test if different salaries correlated to gender. It should be kept in mind that the above procedure may reduce inequalities in the sample but will not eliminate them, because (as previous research has shown) jobs which appear identical at first glance may prove to be different in myriad ways (Bielby & Baron, 1986).

Canada. A stratified sample of twenty-eight employers was asked to participate in a survey of personnel and their organizational commitment. Ten were firms selected at random from the Globe and Mail's annual roster of Canada's largest organizations, twelve were medium-sized firms from Western Canada, three were educational institutions, and three were government agencies. Since organizational type was not a variable of interest here, organizations from Alberta and British Columbia were recruited randomly within each classification. The educational and government institutions were included because they brought potentially different organizational cultures and constructs of effectiveness to the sample, allowing for more reliable generalizations from the findings (cf. Blalock, 1984, chap. 4).

All employers were asked to select three to six managers (female and male) and a similar number of support personnel from a variety of departments, and to distribute a questionnaire to

these individuals. Surveys were returned directly to the researcher. Of the 380 people asked to participate in the study, 340 agreed and 306 responses were ultimately received (90%). 202 (66%) of the respondents were female, 196 (65%) were married, and 150 (44%) were managers.

United States. A stratified sample composed of fifteen employers was asked to participate: five were firms selected at random from the Fortune 500 list, five were medium-sized firms from the Western U.S., three were educational institutions and two were government agencies. Except for the stipulation of locale (California, Utah, and Oregon), organizations were recruited randomly within each group. The same procedure described for Canada was used for respondent selection. Of the 200 people asked to participate in the study, 185 agreed and 157 responses were ultimately received (85%). 74 (47%) of the respondents were female, 61 (39%) were managers and approximately 106 (68%) were married.

#### Instrument and Measures

Employee commitment was measured by the fifteen item Organizational Commitment Questionnaire (Porter et al., 1974), which has demonstrated good psychometric properties and has been used with a wide range of job categories (Mowday et al., 1979). Two sub-scales were created based on the results of a confirmatory factor analysis, Cattell's (1965) Scree test, and eigenvalues (>1.00) (Kaiser, 1970). Both methods identified two factors for retention in both cultures: attitudinal commitment (Canada, Cronbach's alpha = .89; U.S., Cronbach's alpha = .93)

and behavioural commitment (Canada, Cronbach's alpha = .79; U.S., Cronbach's alpha = .86).

-----  
 Insert Table 1 about here  
 -----

Table 1 indicates that two variables used originally by Mowday et al. (1979) loaded on both factors similarly and were thus to be excluded from further analyses. Since Mowday and colleagues originally used these scales for specific types of employees (such as public, bank, and telephone company employees), and since in each case in their study different items loaded on different factors (Mowday et al., 1982, p. 223), the fact that this study used different companies and institutions, ranging from manufacturing to educational, might account for the discrepancy. Other studies using the scale across various types of organizations have not reported any factor loadings (e.g., Luthans et al., 1987), and cross-national studies using the above scale have also failed to report such data (e.g., Luthans et al., 1985). It is thus not easy to attribute this study's results to the sample selection and/or the countries used.

Even though several items were reversed (as suggested by Mowday and colleagues), factor loadings were still negative. The loadings obtained for the Canadian and American samples are obviously quite different, especially when looking at behavioural commitment. While the Canadian sample has positive loadings except for the last item, the U.S. sample has negative loadings except for the first and last items. Thus, direction and degree of relationship for the two data sets is not identical (Rummel,

1970, p. 457). The loadings obtained here would seem to indicate that the items (especially those dealing with behavioural commitment) have different meanings for Canadian and American respondents--in itself, an important discovery (Bhagat & McQuaid, 1982).

The final section of the questionnaire concerned demographic characteristics and enquired into the employee's annual income, educational background and job title. A trichotomous variable was created to substitute for the reported annual income figure in the analyses described below (cf. Table 4 for labels). The hierarchical level variable had two categories: manager (management title indicated, e.g., vice president, divisional manager, etc.) and support personnel.

#### Analyses

Two types of multivariate analysis were used to test the data obtained in this study. First, the data was tested for association between the two dichotomous variables (gender and hierarchical level) and the trichotomous income variable (less than \$20,000, \$20-39,999 and \$40,000 and more). Log-linear analyses were done testing for simple effects and interaction effects. MANOVA (multivariate analysis of variance) and ANOVA (univariate analysis of variance) were then used to compare the scores of each of the groups (manager versus support personnel; female versus male) on the two scales measuring behavioural and attitudinal commitment. To assess the differences between the countries, two-tailed  $t$ -tests were performed.

Power of tests. To confirm or reject any of the research questions stated above, several statistical decisions were made

regarding the alpha error and power, as suggested by Cohen, who states: "the power of a statistical test of a null hypothesis is the probability that it will lead to the rejection of the null hypothesis" (1977, p. 4). The power of each of the following tests was calculated with a .30 effects size. This effect size represents a conservative approach which is generally advisable when using field data. Effect size connotes the degree to which a phenomenon is present in a population; that is, the degree to which the null hypothesis is false. These calculations led to power levels of .70 to .95, which indicate that in all instances where the results of the tests done for questions 2, 3, 4 and 5 did not allow the rejection of the null hypothesis, there was nevertheless at least a 70% chance of rejection if the actual effect was as large as .30. According to Cohen, this level of power is acceptable and not often attained in the behavioural sciences.

### Results

The findings of our analyses are given below, according to the five research questions given earlier.

Question 1. Our first question concerned whether or not a disproportionate number of females in varying hierarchical levels would be more likely to draw a lower income. To test this, a log-linear analysis was done. Bonett and Bentler (1983) have suggested that a single effect model can be used as a reference point for evaluation, allowing for a comparison of the models; this approach was adopted. Table 2 shows the results of several models, which indicated that the single effects of Income and Gender, in addition to Hierarchical Level, improved the fit of

the model readily for Canada ( $\Delta G^2 = 122.13$ ). The result was not as good for the U.S. sample ( $\Delta G^2 = 32.96$ ). Adding the two-way interaction between Gender and Income to the single effects model also significantly improved the fit, as did the interactions between Gender and Hierarchical Level for the Canadian sample. With four degrees of freedom left and only two of the possible three two-way interactions included, the model represented a very good fit. In contrast, the fit obtained for the U.S. sample was only satisfactory; however, the "structural" features of the data showed the American sample to be far less divergent than the Canadian to start with ( $\Delta G^2 = 95.45$  for the American sample versus 292.97 for the Canadian one) (cf. Bishop, Fienberg & Holland, 1975, chap. 2-4).

-----  
 Insert Table 2 about here  
 -----

Bonett and Bentler (1983) have recommended Goodman's Norm Fit Index as a means of calculating the amount of total variance reduced by each model. The index indicated that by including all one-way effects and the three two-way gender effects, the amount of variance can be reduced for the Canadian sample by 92.1%. This was considered to be a very good fit (Bonett & Bentler, 1983). In the U.S. sample, the variance was reduced by 72.4%--a satisfactory fit (Bishop et al., 1975, chap. 2-4).

The log-linear analysis-generated derivatives for both countries--not included here due to space limitations--indicated that far fewer women than men were in high income positions, and that even when women occupied similar positions they made less money. This result was obtained even though women and men were

selected according to their actual job responsibilities in order to eliminate the problems caused by misleading job titles.

Question 2. Our second question concerned whether or not higher income would cause individuals in both Canada and the U.S. to assess their a) attitudinal and b) behavioural commitment more positively. As explained earlier, the Cronbach's alpha obtained for the behavioural commitment factor was above .80, a desirable level for measures beyond the early stages of development (Nunally, 1978; p. 256). MANOVA and ANOVA analyses were carried out, using income as the dependent variable and organizational commitment as the independent variable. Pillai's  $V$  in Table 3 (I with the effects of H & S removed) indicates that, for Canada, income by itself could explain differences in organizational commitment seen when looking at both kinds of commitment simultaneously. These differences, however, were solely attributable to behavioural commitment (univariate  $F = 7.49$ ). For both countries no significant differences were recorded for the univariate  $F$ -tests on attitudinal commitment. Thus, Question 2a can be negated negatively since higher income did not affect attitudinal commitment positively.

-----  
 Insert Tables 3 & 4 about here  
 -----

According to univariate  $F$ -tests, Canadian lower income participants felt more behaviourally committed to their organization than their higher income coworkers (see Table 4). In the U.S., on the other hand, income levels did not lead to statistically significant differences in behavioural commitment. Thus, Question 2b can be answered negatively for Canada since the

higher income actually predicted lower behavioural commitment, and negatively for the U.S. because of the insignificance of the differences.

Question 3. Our third question concerned whether or not higher hierarchical level would lead individuals in both Canada and the U.S. to assess their a) attitudinal and b) behavioural organizational commitment more positively. Pillai's  $\eta^2$  in Table 3 (H with effects of S & I removed) indicated that, for both Canada and the U.S., hierarchical level by itself did not explain differences in attitudinal or behavioural commitment either when using MANOVA analysis to look at both kinds of commitment simultaneously or when using the univariate F-tests. Questions 3a & 3b, therefore, can be answered negatively for both countries; higher hierarchical levels do not lead individuals to assess either attitudinal or behavioural commitment more positively.

Question 4. Our fourth question asked whether or not gender would affect levels of a) attitudinal and b) behavioural commitment for respondents in both Canada and the U.S. Table 3 indicates that gender did indeed account for overall differences in respondents' organizational commitment for the Canadian sample. When the effects of Income and Hierarchical Level were removed, Pillai's  $\eta^2$  was just barely significant--(3.14,  $p < .06$ )--for the Canadian sample, while for the U.S. one it was not. Once again, no significant overall differences were recorded for the American sample. When looking at the univariate F-tests it is clear that the overall difference in commitment recorded based on gender is solely due to differences in levels of behavioural

commitment for both the U.S. and Canadian respondents. Hence, question 4a must be answered negatively since the univariate  $F$ -tests indicated no differences for attitudinal commitment in either country. Nonetheless, these tests were the strongest indicator that gender is a variable affecting behavioural commitment in Canada. The means in Table 4 showed Canadian women to be less behaviourally committed than Canadian men. The same was apparent for American women and men, but in this case the results were barely significant when looking at the univariate  $F$ -test in Table 3 (2.59,  $p < .10$ ). Since behavioural commitment differed based on gender in both countries, question 4b can be answered positively.

Question 5. Question 5a asked if Canadian respondents differed cross-culturally from their American counterparts in attitudinal and/or behavioural organizational commitment. Table 5 shows no significant differences between corresponding groups (e.g., American males vs. Canadian males; American managers vs. Canadian managers, etc.) for attitudinal commitment, and finds similar results for behavioural commitment, with one exception. This exception was found for

-----  
 Insert Table 5 about here  
 -----

individuals with incomes above \$40,000, in which case the Canadian respondents were found to be less behaviourally committed to the firm than their American counterparts ( $p < .05$ , using a two-tail  $t$ -test). Excepting this, for all practical purposes it can be stated that question 5a should be answered negatively.

Given our earlier argument that behavioural commitment would not be likely to differ according to hierarchical level, these findings should come as no surprise to us. That attitudinal commitment levels were, without exception, higher for all groups in both countries than behavioural commitment levels should also not surprise us since attitudinal commitment preserves the illusion of free will, even if the employee comes to feel it through the process of socialization (cf. Porac & Meindl, 1982).

Question 5b asked if intra-cultural differences in attitudinal and/or behavioural commitment were apparent within the individual countries, differences that would perhaps not show up in a cross-cultural examination of Canada and the U.S. To answer this question it was necessary to look at the results obtained for the previous four. Income levels did lead to differences in behavioural commitment within Canada, where higher income individuals appeared to be less behaviourally committed than their lower income colleagues. Also in Canada, women were less behaviourally committed than men than was the case in the U.S. The magnitude of the difference in behavioural commitment between female and male respondents from the U.S. was far greater than the one obtained in Canada (see Table 5).

The variances in magnitude and responses indicate that the differences found between groups within one of the countries are not the same as those found between groups in the other; in fact, the significant differences obtained for behavioural commitment were, with the sole exception of gender, all in the Canadian sample. Question 5b can therefore be answered positively, and it can be concluded that, despite our cross-cultural examination not

having revealed many differences in attitudinal and behavioural commitment in the two countries, commitment is not the same in both countries.

#### Discussion and Conclusion

Perhaps the single most significant finding of this study is that respondents did not differ significantly in their levels of attitudinal commitment across all groups. Assuming that there was nothing intrinsically wrong with the instrument used in this study, there are two possible explanations for this. The least likely is that our findings reflect the fact that employees are similar in their acceptance of and identification with a company's values and attitudes, and that this acceptance is unaffected by inequalities. Given our previous discussion of the complexities of socialization, however, we should think twice about accepting such a simplistic solution. To accept such a theory would be tantamount to accepting that attitudinal commitment is meaningless as a dimension of organizational commitment, since it would be unlikely to have any effect upon the employee's overall commitment if it remained constant, anymore than the fact that the employee has a brain (another constant unaffected by inequality) has any effect upon his or her overall commitment. A more likely explanation for the findings of this study is that attitudinal commitment is ineffectual only with regard to the variables used in this study (i.e., gender, income, and hierarchical level). This can be clarified by referring back to the socialization process. As was stated earlier, attitudinal commitment will vary according to whether or not the employee agrees with the organization's values and

beliefs from the beginning and according to whether or not he or she becomes socialized. Since the socialization process is dependent upon time and upon the strength of the individual employee's personal values and beliefs, and since in most organizations any group of employees keyed on gender, income and hierarchical level will likely be composed of individuals who vary in tenure and in the strength of their beliefs, it is unlikely that one such group will appear to vary in its attitudinal commitment from the next, as a result of a levelling process (Sheridan, 1985). On the other hand, groups keyed on different variables, such as tenure, religious or educational background, and so forth--variables that would more directly affect the socialization process--would likely show differences in attitudinal commitment.

Overall, the results of this survey also suggest that women in both Canada and the U.S. feel less behaviourally committed than men. In the light of Pfeffer and Lawler's justification paradigm, it is natural to assume that this has something to do with the fact that female respondents usually received lower levels of remuneration than male peers in similar positions. As well, the data indicates that attitudinal commitment does not differ according to gender in either country, despite wage inequalities. This may be the result of socialization, or (more likely) the result of the specific socialization process of retroactive justification, which leads individuals faced with inequality to become committed to their employers regardless of the reality of the situation. Inequality might also be of less concern to a female employee if she does not see the higher wages

she might deserve as necessary, which might be the case if she is a member of a two income family--more likely to be the case with female employees than with male--whose sum income is great enough that it can absorb the economic impact of inequality's effects. In such a circumstance, socialization would become easier than it would be if the employee was scrambling to make ends meet and was reminded with every paycheck that she could do so much easier if she were paid fairly.

While gender apparently can predict differences in commitment, hierarchical level apparently cannot. In contrast to earlier studies (e.g., Salancik, 1977), this study did not find any significant differences in hierarchical-based behavioural or attitudinal commitment in either country. However, Canadian respondents' behavioural commitment did differ according to income levels; high income earners were found to be less behaviourally committed than others. It is possible that these employees possess special skills which are easily employed elsewhere, and that they therefore feel more independent than others (cf. O'Reilly & Chatman, 1986).

The only cross-cultural differences indicated by the data in this study were in the levels of behavioural commitment among American and Canadian high income earners. American respondents were more behaviourally committed than their Canadian colleagues, a phenomenon which might be explained by the fact that "non-income perks"--e.g., company car, life insurance, health spa facilities, etc.--are far more common in the U.S. than in Canada. With fringe benefits like these, the American high income earner may leave more than just his or her paycheque behind when

quitting a job. However, while our findings seem to indicate that cross-cultural differences between the U.S. and Canada in attitudinal and behavioural organizational commitment were practically non-existent, intra-cultural differences abounded. The fact that Canadian groups based on income and gender differed significantly in behavioural organizational commitment, while such differences were only recorded for groups based on gender in the U.S., confirms Bhagat and McQuaid's (1982) theory that intra-cultural differences may be apparent even when cross-cultural ones are not. Since (as was stated earlier) different approaches to organizational commitment indicate different subjective cultures, these results indicate that the various employee groups in the two countries most likely have different subjective cultures.

### Implications

The findings of this study, if confirmed by others, have important implications for future commitment research. The discovery that the dimension of attitudinal commitment apparently fails to distinguish respondents according to gender, income, or hierarchical level-based variables--variables that have been identified as important determinants of organizational commitment in previous research (e.g., Morrow, 1983; Weiner, 1982 for an extensive review)--seems to indicate that there is little point in including it in research using these or similar variables. Since groups keyed on other variables that more directly affect the socialization process would be more likely to show differences in attitudinal commitment, research into attitudinal commitment should perhaps make use of such variables. Future

research incorporating the traditional variables used in this study, however, should concentrate exclusively upon behavioural commitment and ignore attitudinal commitment.

It should perhaps be mentioned at this point that O'Reilly and Chatman (1986) separated attitudinal commitment into attitudinal and identificational commitment and, using two different constructs to measure these, found that employees differed according to income. The measures of attitudinal commitment used in this study lumped the two together, possibly off-setting divergent effects. It may be that this process reflects the future of attitudinal commitment research, but this remains to be seen.

Though behavioural commitment represents the future of commitment research examining the specific variables examined here, it must not be forgotten that even this dimension of organizational commitment was not always affected by the variables we used in the way in which we expected. The data obtained for the American sample suggests that situational and demographic variables that might be expected to lead to inequalities may actually not radically affect behavioural commitment levels, despite past research and theories which would suggest that this should be the case (e.g., Pfeffer & Lawler, 1980; Salancik, 1977). Based on the justification paradigm, commitment levels should be higher for managers, but this was not the case here. Since much justification process research has been short-term and/or in laboratory settings (Porac & Meindl, 1982; Porac & Salancik, 1981), or has examined individuals very early in their careers, when income may be more important than

anything else (e.g., O'Reilly & Caldwell, 1981), it is not surprising that this study recorded different findings, and it may be true that the justification process is effective only to a certain point and under certain conditions. This raises the possibility that inequality due to hierarchical level or salary in the workplace may not affect behavioural commitment as much as might be expected, and suggests that individuals within a given organization often may not even perceive inequalities as such--a theory that is supported by much past research (e.g., Gattiker & Nelligan, 1988; Brousseau, 1983; Baron & Bielby, 1986; Crosby, 1982; O'Reilly, Parlette & Bloom, 1980), and which a knowledge of the possibilities of the socialization process makes believable. The justification process bears further examination, as do the effects of what the objective observer would call inequality.

The presence of intra-cultural differences in the absence of cross-cultural ones suggests that earlier cross-cultural research concentrating solely on countries with distinctly different objective cultures (e.g., Luthans et al., 1985) might have been somewhat hasty in assuming that objectively similar cultures would yield little in the way of interesting results and justifies Bhagat and McQuaid's (1982) claim that such differences exist. As Hofstede (1980) has already suggested, future research comparing work related attitudes in different cultures should concentrate on identifying differences which might be due to objective culture as well as the one's due to subjective culture.

A final note on the measures used in this study: because this study obtained different factor loadings for Canada than

those obtained by Mowday et al., (1979) for U.S. respondents (possibly because it studied different types of organizations), future research of this kind should test respondents from organizations similar to those used by Mowday and colleagues. The measures used here clearly have the potential to increase our knowledge about the effects of wage inequality, gender and position on employees' behavioural organizational commitment; this in itself warrants further work in this area. However, if different factor loadings are still obtained in future studies, the use of these measures outside the U.S. should be questioned (e.g., Luthans et al., 1985; Sekaran, 1986).

Because of the exploratory nature of this study, we took Blalock's (1984) advice and did not use causal analysis to assess the influence of inequalities on organizational commitment; future research should do this, however. It is hoped that future research will also examine the effects of environmental influences such as equal rights laws, Equal Employment Opportunity Commission (EEOC) and labour relations on organizational commitment, factors not considered here.

## References

- Adler, N. J. (1983). Cross-cultural management research: The ostrich and the trend. The Academy of Management Review, 8, 226-232.
- Angle, H. L. & Perry, J. L. (1981). An empirical assessment of organizational commitment and organizational effectiveness. Administrative Science Quarterly, 26, 1-14.
- Bhagat, R. S. & McQuaid, S. J. (1982). The role of subjective culture in organizations: A review and directions for future research. Journal of Applied Psychology Monograph, 67, 653-685.
- Bielby, W. T. & Baron, J. N. (1986). Men and women at work: Sex segregation and statistical discrimination. American Journal of Sociology, 91, 759-799.
- Bishop, Y. M. M., Fienberg, S. E. & Holland, P. W. (1975). Discrete multivariate analysis: Theory and practice. Cambridge, MA: MIT Press.
- Blalock, H. M. (1984). Basic dilemmas in the social sciences. Beverly Hills: Sage Publications.
- Blau, F. D. & Ferber, M. A. (1985). Women in the labor market--The last twenty years. In L. Larwood, A. H. Stromberg, & B. A. Gutek (Eds.), Women and work (Vol. 1) (pp. 19-49). Beverly Hills: Sage Publications.
- Bonett, D. G. & Bentler, P. M. (1983). Goodness-of-fit procedures for the evaluation and selection of log-linear models. Psychological Bulletin, 93, 149-166.
- Brousseau, K. R. (1983). Toward a dynamic model of job-person relationships: Findings, research questions, and implications for work system design. Academy of Management Review, 8 (pp. 33-45).

- Bruning, N. S. & Snyder, R. A. (1983). Sex and position as predictors of organizational commitment. Academy of Management Journal, 26, 485-491.
- Cattell, R. B. (1965). Higher order factor structure and reticular versus hierarchical formulae for their interpretation. In C. Banks & J. Broadhurst (Eds.), Studies in psychology (pp. 223-226). London: University of London Press.
- Cattell, R. B. (1966) The scree-test for the number of factors. Multivariate Behavioral Research, 1, 245-276.
- Child, D. (1970). The essentials of factor analysis. New York: Holt, Rinehart & Winston.
- Cohen, J. (1977). Statistical power analysis for the social sciences. New York: Holt, Rinehart & Winston.
- Crosby, F. J. (1982). Relative deprivation and working women. New York: Oxford University Press.
- Evan, W. M. (1976). Organization theory: Structures, systems and environments. New York: Wiley.
- Gattiker, U. E. & Nelligan, T. W. (1988). Journal of Organizational Behaviour, 9, 77-96.
- Griffeth, R. W., Hom, P. W., DeNisi, A. S. & Kirchner, W. K. (1985). A comparison of different methods of clustering countries on the basis of employee attitudes. Human Relations, 38, 813-840.

- Hofstede, G. (1984). Culture's consequences. International differences in work-related values. Beverly Hills: Sage Publications.
- Hrebiniak, L. G. & Alutto, J. (1972). Personal and role-related factors in the development of organizational commitment. Administrative Science Quarterly, 17, 555-572.
- Kaiser, H. F. (1974). An index of factorial simplicity. Psychometrika, 39, 31-36.
- Kemp, A. A. & Beck, E. M. (1986). Equal work, unequal pay. Work and Occupations, 13, 324-347.
- Labour Canada (1986). Equal pay for work of equal value. Ottawa: Minister of Supply and Services, Canada.
- Larwood, L. (1984). Organizational behaviour and management. Boston, MA: Kent Publishing Co.
- Luthans, F., Baack, D., & Taylor, L. (1987). Organizational commitment: Analysis of antecedents. Human Relations, 40, 219-236.
- Luthans, F., McCaul, H. S. & Dodd, N. G. (1985). Organizational commitment: A comparison of American, Japanese, and Korean employees. Academy of Management Journal, 28, 213-219.
- Morrow, P. C. (1983). Concept redundancy in organizational research: The case of work commitment. Academy of Management Review, 8, 486-500.
- Mowday, R. T., Porter, L. W. & Steers, R. M. (1982). Employee organization linkages. New York: Academic Press.

- Mowday, R. T., Steers, R. M. & Porter, L. W. (1979). The measurement of organizational commitment. Journal of Vocational Behaviour, 14, 224-247.
- Nunnally, J. C. (1978). Psychometric theory (2nd ed.). New York: McGraw Hill.
- O'Reilly, Ch. A. & Caldwell, D. F. (1981). The commitment and job tenure of new employees: Some evidence of postdecisional justification. Administrative Science Quarterly, 26, 597-616.
- O'Reilly, Ch. A. & Chatman, J. (1986). Organizational commitment and psychological attachment: The effects of compliance, identification, and internalization on prosocial behaviour. Journal of Applied Psychology, 71, 492-499.
- O'Reilly, Ch. A., Parlette, N. G. & Bloom, R. (1980). Perceptual measures of task characteristics: The erasing effect of differing frames of references and job attitudes. Academy of Management Journal, 23, 118-131.
- Pfeffer, J. (1982). Organizations and organization theory. Boston, MA: Pitman.
- Pfeffer, J. & Lawler, J. (1980). Effects of job alternatives, extrinsic rewards, and behavioral commitment on attitude toward the organization. Administrative Science Quarterly, 25, 38-56.
- Porac, J. F. & Meindl, J. (1982). Undermining overjustification: Inducing extrinsic task representations. Organizational Behaviour and Human Performance, 29, 208-226.
- Porac, J. F. & Salancik, G. R. (1981). Generic overjustification: The interaction of extrinsic rewards. Organizational Behaviour and Human Performance, 27, 197-122.

- Porter, L. W., Steers, R. M., Mowday, R. T. & Boulian, P. V. (1974). Organizational commitment, job satisfaction, and turnover among psychiatric technicians. Journal of Applied Psychology, 59, 603-609.
- Rummel, R. J. (1970). Applied factor analysis. Evanston, IL: Northwestern University Press.
- Salancik, G. R. (1977). Commitment and the control of organizational behaviour. In B. M. Staw and G. R. Salancik (Eds.), New directions for organizational behaviour. Chicago: St. Clair Press.
- Sekaran, U. (1986) Mapping bank employee perceptions of organizational stimuli in two countries. Journal of Management, 12, 19-30.
- Sheridan, J. E. (1985). A catastrophe model of employee withdrawal leading to low job performance, high absenteeism, and job turnover during the first year of employment. Academy of Management Journal, 28, 88-109.
- Steers, R. M. & Porter, L. W. (1983). Employee commitment to organizations. In R. M. Steers & L. W. Porter (Eds.), Motivation and work behaviour, (pp.441-451). New York: McGraw Hill.
- Triandis, H. C. & Vassiliou, V. (1972). Interpersonal influence and employee selection in two cultures. Journal of Applied Psychology, 56, 140-145.
- Weiner, Y. (1982). Commitment in organizations: A normative view. Academy of Management Review, 7, 418-425.

Table 1

Log-Linear Analysis: Testing for Possible Interaction between Gender, Hierarchical Level and Income

Model	Used DF	DF Left	CANADA			U.S.		
			$G^2$	$\Delta G^2$	Goodman's Norm Fit Index	$G^2$	$\Delta G^2$	Goodman's Norm Fit Index
Hierarchical Level	2	10	292.97*			95.45*		
				86.50			32.54	
[H,I]	2	8	206.47*		.295	62.91*		.341
				35.63			.42	
[H,I,S]	1	7	170.84*		.417	62.49*		.343
				98.79			34.16	
[H,I,S, S x I]	2	5	72.05*		.754	28.33*		.703
				48.88			1.98	
[S,H,I,SI, S x H]	1	4	23.17*		.921	26.35*		.724

S = Sex

H = Hierarchical level

I = Income

\* $p < .10$

Table 2

Items Used to Define Two Factors: Attitudinal and Behavioural Commitment

		U.S. Communa- lity	U.S. Factor Loadings	CANADA Communa- lity	CANADA Factor Loadings
1 Attitudinal Commitment	I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful	.59	.77	.38	.55
	I talk up this organization to my friends as a great employer	.70	.77	.61	.66
	I feel very little loyalty to this organization	.62	-.78	.45	-.13
	I am proud to tell others that I am part of this organization	.67	.77	.64	.63
	I am extremely glad I chose this organization to work for over others	.54	.63	.56	.67
	I really care about the fate of this organization	.67	.60	.49	.56
	Deciding to work for this org. was a definite mistake on my part	.50	-.53	.51	-.32
	Variance explained per factor		46.80		43.10
	Eigenvalue		7.32		6.47
2 Behavioural Commitment	I would accept almost any type of job assignment in order to keep working for the organization	.50	.70	.44	.19
	I could just as well be working for a different organization as long as the type of work was similar	.48	-.69	.39	.57
	It would take very little change in my present circumstance to cause me to leave this organization	.47	-.56	.47	.62
	There's not too much to be gained by sticking with this organization indefinitely	.50	-.43	.51	.66
	Often I find it difficult to agree with this organization's policies on important matters relating to its employees	.44	-.55	.43	.62
	For me this is the best of all possible organizations to work for	.72	.65	.61	-.31
		Variance explained per factor		6.50	
	Eigenvalue		1.22		1.19

Note. The above factors were obtained using principal components analysis (SPSSx PA1). Orthogonal varimax rotations were performed on the data. Only loadings greater than .25 were statistically significant ( $p < .001$ ), according to the Burt-Banks criterion (Child, 1970). Factors were selected based on Eigenvalues ( $> 1.00$ , see Kaiser, 1970) and a Scree-test (Cattell, 1966).

The following items loaded high on both factors and were thus left out in all subsequent analyses:  
 I find that my own personal values and the organization's values are very similar  
 This organization really inspires the very best in me in the way of job performance

Table 3

Multivariate Analysis of Variance for Attitudinal and Behavioural Commitment

Source	Multivariate Tests of Pillai's $V$			Univariate F-Tests	
	df	F	(df)	Attitudinal	Behavioural Commitment
<b>I (Income)<sup>1</sup></b>					
CANADA:	1	3.66***	(2,274)	.39	7.49****
U.S.:	1	1.37	(2,65)	1.02	1.23
<b>I with effects of H &amp; S removed<sup>2</sup></b>					
CANADA:	1	3.39***		.13	6.91****
U.S.:	1	1.37		1.02	1.24
<b>(Hierarchical Level)<sup>3</sup></b>					
CANADA:	1	3.39***	(2,274)	.13	6.91****
U.S.:	1	1.34	(2,65)	.11	1.27
<b>H with effects of S &amp; I removed</b>					
CANADA:	1	1.07		2.10	.99
U.S.:	1	1.34		.11	1.37
<b>S (Sex)<sup>4</sup></b>					
CANADA:	1	3.14**	(1,274)	.04	5.91**
U.S.:	1	1.55	(2,65)	.01	2.59
<b>S with effects of H &amp; I removed</b>					
CANADA:	1	3.14**		.04	5.91**
U.S.:	1	1.57		.01	2.59*

Note. Multivariate tests compare the two groups (e.g., managers vs support personnel) on all four factors simultaneously, using Pillai's  $V$  as calculated by SPSSX MANOVA, whereas univariate tests compare the groups on one factor at a time only. Univariate  $F$  tests are given in parentheses. Scale for means: 1 = Agree completely; 5 = Disagree completely.

1) I = income level of respondent (<\$20,000; \$20 - 40,000; >\$40,000)

\*\*\*  $p < .05$

2) Looking at income effects having removed possible effects of the person's gender and hierarchical level.

\*\*  $p < .05$

3) H = hierarchical level of respondent (manager versus support personnel)

\*  $p < .10$

4) S = sex of respondent (female versus male)

\*\*\*\*  $p < .01$

Table 4

T-Tests Comparing Attitudinal and Behavioural Commitment

Source	CANADA Attitudinal vs. Behavioural Commitment			U.S. Attitudinal vs. Behavioural Commitment			
		Mean	Standard Deviation	T-Test	Mean	Standard Deviation	T-Test
Hierarchical Level Manager	AC	2.73	.46	7.94**	2.70	.52	5.71**
	BC	3.27	.53		3.23	.50	
Support Personnel	AC	2.52	.47	10.31**	2.57	.43	5.16**
	BC	3.32	.56		3.17	.47	
Income: Less than \$20,000	AC	2.72	.44	8.00**	2.76	.52	2.30**
	BC	3.23	.50		3.20	.53	
\$20,000--\$40,000	AC	2.69	.49	7.02**	2.63	.42	7.23**
	BC	3.28	.58		3.18	.43	
More than \$40,000	AC	2.60	.47	8.23**	2.74	.62	2.06**
	BC	3.56	.50		3.27	.54	
Sex: Female	AC	2.72	.45	10.95**	2.70	.47	5.43**
	BC	3.30	.52		3.25	.52	
Male	AC	2.65	.49	7.02**	2.67	.50	5.46**
	BC	3.27	.58		3.14	.44	

Note. The scale used ranged from 1 (agree completely) to 5 (disagree completely).

Table 5

T-Tests Comparing Attitudinal and Behavioural Commitment between the United States and Canada

Source	U.S. vs. CANADA	U.S. vs. CANADA
	Attitudinal Commitment	Behavioural Commitment
	I-Test	
<b>Sex:</b>		
Female	.34	.45
Male	.23	1.54
<b>Income:</b>		
Less than \$20,000	.47	.09
\$20,000--\$40,000	1.05	1.47
More than \$40,000	.84	2.05*
<b>Hierarchical Level:</b>		
Manager	.47	.54
Support Personnel	.05	.94

\*p &lt;.05