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British Columbians' Expectations and Attitudes Going into the Third Millennium¹

by

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Abstract

This paper describes some of the expectations and attitudes of British Columbians toward possible events in the first one hundred years of the third millennium, and explains their happiness and satisfaction with the quality of their lives. We report on results of two independent surveys taken in October and November 1999, one containing 499 respondents living south of Hundred Mile House and the other containing 969 respondents living north of Hundred Mile House. We compare respondents' self-reported health with the self-reported health of 142,674 Americans from the 50 states of the USA in 1998. Answers to open-ended questions about respondents' greatest fears, hopes and things they would change to improve the quality of their lives are reviewed. We explain respondents' satisfaction with life as a whole, happiness and satisfaction with the overall quality of life from a limited set of 15 variables, which allows us to compare our British Columbian results with results from seven other surveys taken over 20 years. Finally, the relative importance of our predictor variables for explaining each of the global assessments is examined.

1. Introduction

In the spring of 1999 researchers at the Institute for Social Research and Evaluation, University of Northern British Columbia, formed a partnership with the *Prince George Citizen* newspaper to undertake a survey of the expectations and attitudes of British Columbians as we left the second and entered the first hundred years of the third millennium. The general plan was to divide the province somewhat arbitrarily into a southern and a northern part, and to compare the views of residents in the two parts. The town of Hundred Mile House was selected as the demarcation point, with households located in or south of town designated as southern residents and households located north of town designated as northern residents. Besides creating a description of residents' expectations and attitudes toward the future, we assessed the current quality of their lives using a battery of measures that have been used by us and others in a wide variety of places at different times over the past twenty-five years (e.g., Michalos and Zumbo 1999).

The structure of the essay is as follows. In the next section (2), we describe our sampling technique and questionnaire, and then we describe our sample (section 3). In section (4) we provide descriptive statistics regarding respondents' expectations and attitudes toward events that may occur in the next 100 years, as well as satisfaction levels for a variety of aspects of life. In the next section (5), we compare respondents' self-reported health with the self-reported health of 142,674 Americans from the 50 states of the USA in 1998. Section (6) summarizes responses to our open-ended questions about respondents' greatest fears, hopes and things they would change to improve the quality of their lives. In section (7), we explain respondents' satisfaction with life as a whole, happiness, and satisfaction with the overall quality of life from a limited set of 15 variables, which allows us to compare our British Columbian results with results from seven other surveys taken over 20 years. In section (8) we apply a new statistical method for ordering the predictor variables from the regressions reported in section (7) in terms of their relative importance to global assessments of life in each regression model (Thomas, Hughes, & Zumbo, 1998). The final section (9) is a brief conclusion.

2. Sampling Technique and Questionnaire

Seven-page questionnaires were mailed out to two independently selected random samples of households in British Columbia in October and November 1999, with 3000 going to households in or south of Hundred Mile House and 5000 going to households north of that town. The decision to make Hundred Mile House the demarcation line between north and south was based on the relative numbers and sizes

of cities above and below it. Although about 90 percent of the population resides in the southern part of the province, because we wanted to have useful samples from several northern towns, we drew a larger sample from the north than from the south. This was the first time northern and southern views were systematically compared in British Columbia.

According to McNiven (1999, p.8), "Geographers have developed some consensus on what defines the North, but no common agreement about its boundary has emerged". He and others at Statistics Canada constructed a concept based on 16 variables which reveal "not a distinct north-south divide" but "a gradual transition from north to south". We discovered this work some months after our surveys and could only make limited use of it, but others undertaking north-south comparisons may want to examine it. In broad strokes, our north seems to include McNiven's two northern regions, which he calls the North and North Transition Zones, plus his South Transition Zone, and our south includes only his South.

The first three pages of our questionnaire listed 42 events and states of affairs that might occur in the next one hundred years, and respondents were asked indicate whether they thought "it would be good (or bad) if it happened" and then if they thought it was "probably going to happen (or not)". For example, the first item was "Canada will merge with the United States". These items were followed by a page containing 17 "things affecting people today", such as their family relations, health, jobs and so on. The extent to which people were satisfied with these things was measured on a 7-point Likert scale with response categories ranging from "very dissatisfied=1 point", through "an even balance=4", to "very satisfied=7".

After these items, there was a question designed to measure the extent to which people were happy with their lives as a whole, based on a seven point scale ranging from "very unhappy=1 point", through "an even balance=4", to "very happy=7".

There was then a battery of four self-reported health items designed and used extensively by the U.S. Center for Disease Control and Prevention (CDC) in all of the 50 states. This was the first time these items were used on a provincial population in Canada. An example of one of these items is "Would you say that in general your health is (a) excellent, (b) very good, (c) good, (d) fair, or (e) poor?"

These were followed by three open-ended questions asking respondents first, to describe their "greatest fear for the next few years", and then "what they most hoped for". Then we asked, "All things considered, if you could change anything about your life to improve its quality, what would you do?" Finally, we asked some questions about employment and education, and the questionnaire ended with two pages of demographic questions (e.g., gender, age, education).

3. Sample Characteristics

By the end of November, 499 (17%) useable questionnaires were returned from the south and 969 (19%) were returned from the north, which form the working datasets for the survey. For the southern group the sampling error margin is plus or minus 4.5 percentage points 19 times out of 20 and for the northern group it is 3.2 percentage points.

The average age in the southern group is 51 (ranging from 18 to 93) and in the northern group it is 47 (ranging from 18 to 91). Sixty percent of the southern group and 56% of the northern group are male. The median household income for the southern group is \$55,000 per year, compared to \$60,000 for the northern group. Fifty-four percent of the southern group are employed full or part-time, compared to 65% of the northern group. Sixty percent of the southern group and 62% of the northern group are married. A full 30% of the southern group have a university degree, compared to 17% of the northern group.

Although we are unable to make rigorous comparisons between our samples and the northern and southern populations from which they are drawn, we can certainly say that our samples have percentages of males, married and university educated people that are higher than they should be to be strictly representative according to the most recent provincial census figures. According to the 1996 census, about 49% of the southern population are male, compared to 51% of the northern group in British Columbia. In the 1996 census, 52% of southerners and of northerners over 15 years of age reported being married, and 14% of southerners compared to 7% of northerners held bachelor's or higher degrees.

It would have been possible to assign weights to our responses to get a perfect fit with census figures. However, we have no way of knowing how representative each of our respondents is of every person in the population with the same demographic profile (gender, age, education and so on). For example, maybe the 20 year old males with a university education who filled out our questionnaire are significantly different somehow from those who did not fill out our questionnaire. So multiplying our responses for such people to get a sample that is demographically more representative of the provincial population may produce a sample that is substantively more unrepresentative. We did make a careful investigation of the effect of the disproportionately high percentage of university graduates in our samples by randomly reducing the number of those individuals to match the 1996 census figures of 7% in the north and 14% in the south. We re-ran all our analyses from the initial samples with the "matched" samples and found that our statistical results and conclusions were not

substantively different for the “matched” and unmatched samples. Therefore, because the larger sample sizes give us a bit more power with various statistical manipulations, we have made those our working data-sets.

4. Expectations and Attitudes

Exhibit 1 lists the percentages of northern and southern respondents who indicated that they thought the various events and states of affairs would be good or bad if they occurred, and the percentages who thought they would actually occur in the next hundred years.

For 22 of the 42 items northerners and southerners gave responses that were identical or only one or two percentage points different; e.g.,

75% of northerners and southerners said it would be bad if Quebec separated from Canada,
93% of both groups said it would be good if Northern B.C. got the attention it deserves,
85% of both groups said it would be good if most people got university degrees,
96% of both groups said it would be bad if the polar ice caps melt and seaports are flooded,
94% of both groups said it would be good if the quality of their lives improved in the next five years.

For 3 of these 5 items, northerners and southerners agreed on the probability of the events happening, but for 2 they disagreed; i.e.,

45% of northerners but 61% of southerners thought Northern B.C. would get the attention it deserves,
45% of northerners but 40% of southerners thought the polar ice caps would melt and flood seaports.

The following items had the greatest levels of disagreement regarding things that might happen in the next hundred years. Percentages of people expecting that the events would happen are in parentheses.

Ninety percent of northerners but 62% of southerners thought it would be good if there were tax breaks for northern residents (26% of northerners and 38% of southerners thought it would happen),
26% of northerners but 37% of southerners thought it would be good if religion becomes much less important (60% of northerners and 65% of southerners thought it would happen),
70% of northerners but 60% of southerners thought it would be good if capital punishment becomes reinstated in Canada (42% of northerners and 36% of southerners thought it would happen),
76% of northerners but 86% of southerners thought it would be good if provincial and federal elections began using some system of proportionate representation (56% of northerners and 61% of southerners thought it would happen),
55% of northerners but 47% of southerners thought it would be good if people lived longer than 100 years (45% of northerners and 43% of southerners thought it would happen).

If one were looking for a popular (and populist) political agenda for most British Columbians, some of its elements are discernable in Exhibit 1. Fairly large majorities, north and south, thought it would be bad to change our political geography by merging with the United States, separating Quebec, B.C. or aboriginal nations from the rest of the country, or breaking up the country in any way. Large majorities think it would be good to pay off the national debt, decrease the gap between rich and poor, create a Ministry of Northern Affairs, settle all aboriginal land claims and introduce some form of proportionate representation. Somewhat smaller majorities think it would be good to reinstate capital punishment but to continue the current legal regime regarding therapeutic abortion. Large majorities think it would be bad to have all health insurance privatized and to have only two political parties, a united left and a united right. Of course many of these issues cannot be managed at the provincial level.

Exhibit 2 lists the northern and southern mean scores for the 17 satisfaction items and the one happiness item. The most striking thing about this exhibit is the fact that 10 of the pairs of figures are exactly the same and another 5 differ by only a tenth of a point for northerners and southerners. Statistically significant differences are relatively easy to get with such large sample sizes, but there are no statistically significant differences between the two groups for any of the 18 items. Since these 18 items are fairly standard measures of the quality of people's lives according to reports of their own subjective experiences, it is fair to say that the quality of life of northern and southern British Columbians is practically identical.

The most satisfying aspects of people's lives were satisfaction with their living partners (*mean*=6.0), family relations generally (5.7 north/5.8 south), and friendships and neighbourhoods (5.6). Average scores for happiness with life as a whole were fairly high (5.8), higher than the mean scores for satisfaction with life as a whole (5.6) and the overall quality of life (5.5).

Highest levels of dissatisfaction were expressed for provincial government officials (2.1), federal government officials (2.6) and local government officials (3.4 /3.2).

5. Health

In response to the first item from the CDC, about 82% of northerners and southerners reported that their general health was good to excellent. The second two items distinguish physical and mental health, and ask people to indicate the number of days out of the past 30 that their health was not good. The 'mean number of *good health days* in the past 30 days' for an individual is then calculated by simply summing the mean number of not good physical and mental health days and subtracting the sum

from 30. Both northerners and southerners reported an average of 22.6 good health days in the past 30.

Using data from the CDC Behavioral Risk Factor Surveillance System for 1998, we were able to compare our northern and southern scores with scores from the 50 states plus Washington, D.C. of the USA according to gender and age. Exhibit 3 shows that in all but one case the Americans had on average relatively more good health days in the past 30 than Canadians. The single exception was the case of women aged 50 to 64 in the southern sample. They had an average of 24.8 days compared to 23.3 for the Americans and 21.6 for the northern British Columbian women in the same age group. Recalling that people with university degrees are over-represented in our sample and that such people tend to have relatively higher incomes and better health than those without degrees, it is likely that, if anything, our sample exaggerates the healthiness of B.C. residents. Granting that, the figures in Exhibit 3 are disturbing.

We know there is some sort of cultural bias in self-reports of subjective well-being, including self-reported health, but so far nobody knows exactly how to measure or compensate for such bias (Michalos 1991, 1991a, 1993, 1993a). For example, Americans typically give fairly robust personal reports while Japanese tend to give fairly modest reports of their well-being, although the life expectancy at birth of Japanese is 80 years compared to 77 years for Americans (United Nations Development Program 1999, p.134). Life expectancy is only one gross indicator of health status, but it is useful to illustrate our point that there is no evidence that the Japanese are generally less healthy than the Americans.

6. Fears, Hopes and Things to Change

For all respondents, the most frequently mentioned “greatest fears” for the next few years concerned unemployment and financial insecurity, poor health or health care, and poor government. For the 866 northerners responding to this question, issues related to unemployment and financial insecurity constituted 36% of all issues mentioned, compared to 31% for the 452 southern respondents. Twenty percent of issues mentioned by northerners involved poor health or health care, compared to 22% for southerners. Fifteen percent of issues mentioned by northerners concerned poor government, compared to 9% for southerners.

Thirty percent of things mentioned by 915 northern respondents as “most hoped for” involved employment and financial security, 20% involved good health and health care, and 13% involved good government. For 478 southerners, issues involved good health and health care first (28%), then employment and financial security (25%)

and then good government (11%).

Having determined respondents' fears and hopes, we wanted to find out what respondents would change to improve the quality of their lives, if they "could change anything". The most frequently mentioned things for 797 northerners and 403 southerners were the same, only the percentages of responses were a bit different. Both groups mentioned issues related to employment and financial security first (34% north, 29% south), health second (19% north, 18% south), and educational opportunities third (8% north, 7% south).

The "educational opportunities" response was especially interesting in the light of our questions about education. Forty-four percent of northerners and 40% of southerners reported that they intended to further their education. Seventy-four percent of northerners who intended to further their education planned to do it in the north, compared to only 7% of southerners. Just to clarify the preference more, we asked those who intended to further their education if they would "prefer it to be in the north although that is not presently possible". Eighty percent of northerners said they would prefer it to be in the north.

7. Explaining Life Satisfaction, Happiness and Overall Satisfaction with the Quality of Life from Domain Satisfaction Items

Exhibit 4 provides some comparative figures resulting from regressing mean life satisfaction scores on mean scores for satisfaction with various domains of life. The simple linear model used to obtain these figures was one of the first models applied by social indicators researchers and it is still one of the most frequently used models (Michalos 1991). Since the model merely explains overall life (global) satisfaction in terms of the (domain) satisfaction one gets from one's job, family relations and so on, it is not useful for explaining satisfaction in the generic sense. For the latter, one would require something other than satisfaction to do the explanatory work. For example, in multiple discrepancies theory (MDT) satisfaction is posited as the effect of such things as the perceived discrepancies between what one has and wants, between what one has and others have, and so on (Michalos 1985, 1991). Nevertheless, although the simple linear model does not explain satisfaction in the generic sense, it does allow one to measure the impact of satisfaction with various domains of life on one's perceived overall satisfaction with life. We will also apply the model to explain happiness with life as a whole and satisfaction with the overall quality of life.

Briefly, the samples used in Exhibits 4 and 5 came from the following sources: (A) the office, clerical and technical staff of the University of Guelph (Michalos 1980), (B) rural senior citizens in Ontario (Michalos 1982), (C) residents of Cochrane,

Ontario (Michalos 1983), (D) undergraduate students at the University of Guelph (Michalos 1991), (E) undergraduates in 39 countries (Michalos 1991), (F) residents of Prince George (Michalos and Zumbo 1999), (G) residents of Jasper, Alberta (Zumbo and Michalos 2000), (H) and (I) British Columbian northerners and southerners, respectively. This is the first time the simple linear model was applied to British Columbian samples.

On average, for the nine samples represented in Exhibit 4, we were able to explain 55% of the variance in reported life satisfaction scores from some subset of the 14 predictor variables listed in the exhibit. Our best success came from the Jasper sample in 1997 (column G), at 65%. For northern British Columbians we were able to explain 56% of the variation in life satisfaction scores and for southern British Columbians it was 52%. When all variables are standardized to have means of zero and standard deviations of one, the standardized regression coefficients (Betas) measure the percent of movement in the dependent variable when a predictor variable moves one full unit and every other predictor in the set is held constant. For example, under column G one finds that the Beta value for self-esteem is $\beta = .57$, which means that for every full standard deviation increase in satisfaction with one's own self-esteem, one's life satisfaction increases a bit over half a standard deviation. Inspection of the other figures in that column reveals that satisfaction in no other domain had as great an impact on overall life satisfaction for the 229 Jasper respondents.

It should be noted that the presence of correlation among the predictor variables affects the magnitude of the standardized regression coefficients. Therefore, it is not recommended that standardized regression coefficients be interpreted as reflecting the importance of the predictor. Thus far in this essay we are not interpreting the importance of the predictors, per se, but rather we use the standardized regression coefficients, in part, to help us make comparisons across samples. In the next section we will come back to these regression models and consider the relative importance of the predictor variables.

Reading across the row from $\beta = .57$, one sees that satisfaction with one's own self-esteem was also the strongest predictor of life satisfaction for the sampled 512 Prince George residents in 1997 (column F, $\beta = .57$), for the sample of 296 University of Guelph students (column D, $\beta = .31$) and for northern British Columbians (column H, $\beta = .25$). The Guelph sample was part of the much bigger global student sample whose results are listed in column E. Inspection of that column shows that satisfaction with one's own self-esteem tied with satisfaction with one's university education as the strongest predictors of life satisfaction for the 5107 students in the global sample.

For the other five samples, satisfaction with one's self-esteem was not as

powerful a predictor as (had less explanatory power than) satisfaction with one or more other domains. For the 312 sampled members of the office, clerical and technical staff of the University of Guelph (column A), satisfaction with one's family relations had the greatest explanatory power ($\beta=.35$). For the 273 sampled rural seniors (column B), satisfaction with their housing had the strongest predictive strength ($\beta=.21$); for the 328 Cochrane residents (column C), it was satisfaction with their financial security ($\beta=.24$); and for southern British Columbians, it was satisfaction with their friendships ($\beta=.29$). The southern British Columbia group was the only one for which satisfaction with friendships had the greatest impact on life satisfaction.

The figures just reviewed clearly illustrate the fact that different groups of people with different life circumstances, resources and constraints use different mixtures of ingredients to determine their life satisfaction. The explanatory model used here allowed the groups represented in Exhibit 4 to draw satisfaction from roughly the same set of 14 domains. Analytically speaking, some groups used more and some used fewer of these domains to build their life satisfaction. The Jasper group used only 4 of the 12 possibilities open to them, the rural seniors group used all 12 available, while northern British Columbians used 7 and southern British Columbians used 6, respectively, of the 10 possibilities open to them.

Exhibit 5 provides some comparative figures resulting from regressing mean happiness scores on mean scores for satisfaction with various domains of life. On average, for the nine samples represented in this exhibit, we were able to explain 37% of the variance in reported happiness with life as a whole from some subset of the 16 predictor variables listed in the exhibit. Our best success came from our southern British Columbia sample, at 47%. The strongest explanatory variable for that sample was satisfaction with one's own self-esteem, which had a Beta value of $\beta=.29$. Thus, figuratively speaking, for every full-step increase in satisfaction with their own self-esteem, the overall happiness of these southern British Columbians increased 29% of a step. Put another way still, for every full-step increase in their good feelings about themselves, their overall happiness with life increased almost a third of a step.

As one moves across the columns of Exhibit 5, one finds that satisfaction with self-esteem was also the strongest explanatory variable for northern British Columbians ($\beta=.38$), the Guelph students ($\beta=.26$), the Prince George sample ($\beta=.27$) and the Jasper sample ($\beta=.25$). The strongest explanatory variable for the rural seniors group was satisfaction with their living partners ($\beta=.30$), as it was for the world student sample ($\beta=.18$). Satisfaction with their financial security was the strongest predictor for the Cochrane group ($\beta=.21$) and satisfaction with family relations for the clerical staff sample ($\beta=.38$). As in the case of life satisfaction, different groups built up their

overall happiness with different mixtures of ingredients and some groups drew upon more domains than others. The Jasper sample used only 3 of the 12 possibilities open to them, the rural seniors used all 12, northern British Columbians used 7 of 12 and southern British Columbians used only 5.

When we examined the impact of the same domain satisfaction scores on satisfaction with the overall quality of life in British Columbia, we found that for northerners there were nine statistically significant predictors which collectively accounted for 56% of the variation in the global indicator scores (N=729). Satisfaction with one's own self-esteem was the strongest predictor ($\beta=.30$). Satisfaction with one's personal safety in one's own neighbourhood ($\beta=.19$) was second, followed by satisfaction with financial security ($\beta=.13$), health ($\beta=.12$), job ($\beta=.11$), federal government officials ($\beta=.09$), friendships and recreation activities ($\beta=.08$), and finally family relations generally ($\beta=.06$).

For southerners, we were also able to explain 56% of the variance in satisfaction with the overall quality of life scores (N=356). However, southerners drew on only 7 domains and their strongest predictor was satisfaction with their personal safety in their own neighbourhoods ($\beta=.24$). The relative strength of this predictor was a surprise to us, unlike anything we had found before and certainly merits further exploration. Satisfaction with one's self-esteem was second ($\beta=.19$), followed by satisfaction with financial security and recreation activity ($\beta=.16$), friendships ($\beta=.15$), health ($\beta=.12$) and finally job ($\beta=.10$).

After we undertook all these regression analyses allowing comparisons with earlier surveys, we added the CDC health status items on general health and good health days to our set of predictors in order to measure their explanatory power in the presence of our standard battery of predictors. The CDC items added nothing at all to the explained variance in satisfaction with life as a whole scores, and added one percentage point to the explained variance of life satisfaction and happiness scores. Compared to some other measures of health status that we have used (e.g., the SF-36 in Michalos, Zumbo and Hubley 2000), the CDC items were not very helpful.

8. Relative Importance of the Predictor Variables

Keeping in mind the caveat we provided in the preceding section about interpreting the relative importance of predictor variables based on the magnitude of the Beta coefficient, Thomas, Hughes, and Zumbo (1998) presented a new statistical method for ordering predictor variables in a linear model in terms of their importance in the model. The Thomas, Hughes, and Zumbo method proceeds by defining importance as the relative proportion (percentage) of the resultant model R-squared

that can be attributed to each predictor variable. Said another way, their method additively partitions the R-squared value so that one can attribute a certain proportion of the R-squared to each predictor variable. The computation of this new statistic is straightforward: multiply the Beta coefficient by the simple correlation of the predictor and dependent variable, and then divide this quantity by the model R-squared. One simply performs these computations for each predictor variable in a model.

Exhibit 6 lists the results for each of the linear regression models used to explain life satisfaction, happiness and satisfaction with the overall quality of life. As an example of how to interpret these new methods, consider the explanation of British Columbians' life satisfaction reported in Exhibit 4. From Exhibit 6 we see that for northerners 22% of the explained variation in life satisfaction is attributable to satisfaction with friendships, compared to 31% for southerners. For northerners 27% is attributable to satisfaction with one's own self-esteem, compared to 19% for southerners, and so on. This sort of analysis is possible because of additive properties of the Thomas-Hughes-Zumbo method. For northerners satisfaction with their own self-esteem is clearly the most important and satisfaction with financial security is the least important explanatory variable in the model. For southerners satisfaction with their friendships is the most important and satisfaction with their living partners is the least important explanatory variable in the model. For both groups the explanatory model has 6 significant predictors, 5 of which are the same although they have different levels of importance.

Sometimes people wonder how we or anyone else distinguishes life satisfaction from happiness and satisfaction with the overall quality of life. The answer may be found by examining the relative importance of the different sets of explanatory variables in Exhibit 6. For example, notice first that for northern British Columbians 22% of the explained variance in *life satisfaction* is attributable to satisfaction with friendships and 27% is attributable to satisfaction with one's own self-esteem. However, none of the explained variance in *happiness* is attributable to satisfaction with friendships while 50% is attributable to satisfaction with one's own self-esteem. Thus, for the northern British Columbians in our sample, personal happiness has much more to do with feeling good about one's self than anything else, but satisfaction with one's life as a whole is much more a matter of having satisfying friendships besides feeling good about one's self.

It is perhaps also worthwhile here to call the reader's attention to the relative unimportance of citizen dissatisfaction with provincial, local and federal government officials. In Section 4 we remarked that respondents' levels of dissatisfaction were higher for government officials than for anything else, and highest of all for provincial

government officials. Nevertheless, inspection of Exhibits 4, 5 and 6 reveals that, in the context of roughly a dozen important domains of life, dissatisfaction with provincial and local government officials has no impact on life satisfaction, happiness or satisfaction with the overall quality of life for northerners or southerners. For southerners dissatisfaction with government officials of any kind has no impact on their global assessments, while for northerners dissatisfaction with federal government officials has no impact on life satisfaction, and minimal impact on happiness (5%) and satisfaction with the overall quality of life (4%). Clearly, then, dissatisfaction with government officials is relatively unimportant to respondents' global assessments of their lives as a whole. Although government officials at all levels tend to be public punching bags and to get more than a fair share of attention in the news media in British Columbia (and elsewhere), their impact on people's perceived well-being is negligible compared to many other things.

9. Conclusion

The main aims of this research were to describe some of the expectations and attitudes of British Columbians toward possible events in the first one hundred years of the third millennium, and to explain their satisfaction with life as a whole, their happiness and their satisfaction with the overall quality of their lives. We reported on results of two independent surveys taken in October and November 1999, one containing 499 respondents living south of Hundred Mile House and the other containing 969 respondents living north of Hundred Mile House. The north-south division of the province was fairly arbitrary, but this was the first time anyone undertook two separate surveys simultaneously here. About half of the expectations and attitudes of northerners and southerners were very similar to each other. Levels of satisfaction with 18 aspects of respondents' lives were practically identical for northerners and southerners. With one exception, northern and southern answers to self-reported health questions were shown to be inferior to the self-reported health of 142,674 Americans from the 50 states of the USA in 1998, when the samples were subdivided by age and gender. Answers to open-ended questions revealed that northerners' and southerners' greatest fears for the future concerned issues related to unemployment and financial security. Explanations of respondents' satisfaction with life as a whole, happiness and satisfaction with the overall quality of life from a limited set of 15 variables revealed that for northerners and southerners satisfaction with friendships and one's own self-esteem were most important for life satisfaction, although self-esteem dominated for northerners and friendships dominated for southerners. Regarding happiness, for northerners and southerners satisfaction with

their own self-esteem was most important, but satisfaction with friendships was unimportant for northerners and second most important for southerners. Regarding satisfaction with the quality of life, for northerners satisfaction with one's own self-esteem was most important, compared to satisfaction with personal safety in one's own neighbourhood for southerners.

References

- McNiven, C.: 1999, "North is that direction", *Canadian Social Trends*, 54, pp.8-11.
- Michalos, A.C.: 1980, "Satisfaction and happiness", *Social Indicators Research*, 8, pp.385-422.
- Michalos, A.C.: 1982, "The satisfaction and happiness of some senior citizens in rural Ontario", *Social Indicators Research*, 11, pp.1-30.
- Michalos, A.C.: 1983, "Satisfaction and happiness in a rural northern resource community", *Social Indicators Research*, 13, pp.225-252.
- Michalos, A.C.: 1985, "Multiple discrepancies theory (MDT)", *Social Indicators Research*, 16, pp.347-413.
- Michalos, A.C.: 1991, *Global Report on Student Well-Being, Volume 1: Life Satisfaction and Happiness* (Springer-Verlag, New York).
- Michalos, A.C.: 1991a, *Global Report on Student Well-Being, Volume 2: Family, Friends, Living Partner and Self-Esteem* (Springer-Verlag, New York).
- Michalos, A.C.: 1993, *Global Report on Student Well-Being, Volume 3: Employment, Finances, Housing and Transportation* (Springer-Verlag, New York).
- Michalos, A.C. and B.D. Zumbo: 1999, "Public services and the quality of life", *Social Indicators Research*, 48, pp.125-156.
- Michalos, A.C., B.D. Zumbo and A. Hubley: 2000, "Health and the quality of life", *Social Indicators Research*, in press.
- Thomas, D. R., E. Hughes, and B. D. Zumbo: 1998, "On variable importance in linear regression", *Social Indicators Research*, 45, pp.253-275.
- United Nations Development Program: 1999, *Human Development Report 1999* (Oxford University Press, New York).

Zumbo, B.D. and A.C. Michalos: 2000, "Quality of life in Jasper, Alberta", *Social Indicators Research*, 49, pp.xxx.

Exhibit 1. Percentages of respondents indicating it would be good or bad and whether it will or will not happen.

	Would It Be		Will It Happen?	
	<u>Good</u>	<u>Bad</u>	<u>Yes</u>	<u>No</u>
1. Canada will merge with the United States.	N = 21% S = 26%	N = 79% S = 74%	N = 24% S = 25%	N = 76% S = 75%
2. Quebec will separate from Canada.	N = 25% S = 25%	N = 75% S = 75%	N = 29% S = 27%	N = 71% S = 73%
3. Some aboriginal groups will form separate countries.	N = 14% S = 15%	N = 86% S = 85%	N = 24% S = 23%	N = 76% S = 77%
4. Canada will break up into several countries.	N = 7% S = 9%	N = 93% S = 91%	N = 14% S = 16%	N = 86% S = 84%
5. The national debt will finally be paid off.	N = 93% S = 92%	N = 7% S = 8%	N = 19% S = 22%	N = 81% S = 78%
6. The gap between rich and poor will widen.	N = 3% S = 5%	N = 97% S = 95%	N = 86% S = 82%	N = 14% S = 18%
7. Most people will live longer than 100 years.	N = 55% S = 47%	N = 45% S = 53%	N = 45% S = 43%	N = 55% S = 57%
8. Most people will not live in single family detached homes.	N = 27% S = 33%	N = 73% S = 67%	N = 68% S = 73%	N = 32% S = 27%
9. Religion will become much less important.	N = 26% S = 37%	N = 74% S = 63%	N = 60% S = 65%	N = 40% S = 35%
10. Most people will have to work harder for lower pay.	N = 6% S = 9%	N = 94% S = 91%	N = 80% S = 72%	N = 20% S = 28%
11. Same sex couples will be more commonly accepted.	N = 45% S = 52%	N = 55% S = 48%	N = 86% S = 89%	N = 14% S = 11%
12. There will be fewer prejudiced people.	N = 92% S = 90%	N = 8% S = 10%	N = 42% S = 45%	N = 58% S = 55%
13. There will be a population shift toward the north.	N = 72% S = 77%	N = 28% S = 23%	N = 65% S = 52%	N = 35% S = 48%
14. All health insurance will be privatized.	N = 19% S = 21%	N = 81% S = 79%	N = 65% S = 50%	N = 35% S = 50%

15	Northern B.C. will get the attention it deserves.	N = 93% S = 93%	N = 7% S = 7%	N = 45% S = 61%	N = 55% S = 39%
16	There will be only two political parties, a united right and a united left.	N = 27% S = 29%	N = 73% S = 71%	N = 28% S = 30%	N = 72% S = 70%
17	There will be a provincial Ministry of Northern Affairs.	N = 85% S = 81%	N = 15% S = 19%	N = 60% S = 66%	N = 40% S = 34%
18	Global warming will increase.	N = 10% S = 9%	N = 90% S = 91%	N = 89% S = 87%	N = 11% S = 13%
19	Crime will increase in the North.	N = 1% S = 4%	N = 99% S = 96%	N = 83% S = 80%	N = 17% S = 20%
20	Crime will increase in rural areas.	N = 2% S = 5%	N = 98% S = 95%	N = 81% S = 79%	N = 19% S = 21%
21	Most people will get university degrees.	N = 85% S = 85%	N = 15% S = 15%	N = 29% S = 31%	N = 71% S = 69%
22	An earthquake will destroy Vancouver and the surrounding area.	N = 6% S = 5%	N = 94% S = 95%	N = 45% S = 36%	N = 55% S = 64%
23	Crime will increase in most urban areas.	N = 1% S = 3%	N = 99% S = 97%	N = 86% S = 81%	N = 14% S = 19%
24	The mining industry in B.C. will disappear.	N = 10% S = 14%	N = 90% S = 86%	N = 35% S = 40%	N = 65% S = 60%
25	All natural resource industries will specialize in value-added products.	N = 86% S = 85%	N = 14% S = 15%	N = 73% S = 74%	N = 27% S = 26%
26	The polar ice caps will melt and many seaports will be flooded.	N = 4% S = 4%	N = 96% S = 96%	N = 45% S = 40%	N = 55% S = 60%
27	The quality of your own life will improve in the next five years.	N = 94% S = 94%	N = 6% S = 6%	N = 61% S = 61%	N = 39% S = 39%
28	You will find it more difficult to maintain your standard of living.	N = 6% S = 8%	N = 94% S = 92%	N = 66% S = 62%	N = 34% S = 38%
29	The world will witness the second coming of Jesus Christ.	N = 72% S = 65%	N = 28% S = 35%	N = 21% S = 16%	N = 79% S = 84%
30	There will be a catastrophic nuclear explosion somewhere in the world.	N = 2% S = 3%	N = 98% S = 97%	N = 75% S = 73%	N = 25% S = 27%
31	Capital punishment will be reinstated in Canada.	N = 70% S = 60%	N = 30% S = 40%	N = 42% S = 36%	N = 58% S = 64%
32	Abortion will be outlawed again.	N = 30% S = 25%	N = 70% S = 75%	N = 19% S = 17%	N = 81% S = 83%
33	There will be tax breaks for Northern residents.	N = 90% S = 62%	N = 10% S = 38%	N = 26% S = 38%	N = 74% S = 62%

34	B.C. will separate from the rest of Canada.	N = 20% S = 21%	N = 80% S = 79%	N = 8% S = 12%	N = 92% S = 88%
35	The institution of marriage will hold up in the next century.	N = 95% S = 94%	N = 5% S = 6%	N = 78% S = 80%	N = 22% S = 20%
36	Couples will continue to have fewer children in the next century.	N = 67% S = 74%	N = 33% S = 26%	N = 89% S = 91%	N = 11% S = 9%
37	The north east of B.C. will become part of Alberta.	N = 26% S = 23%	N = 74% S = 77%	N = 18% S = 16%	N = 82% S = 84%
38	There will be off shore oil and gas wells along the B.C. coast.	N = 63% N = 59%	N = 37% S = 41%	N = 74% S = 67%	N = 26% S = 33%
39	Provincial and Federal elections will be using some system of proportionate representation.	N = 76% S = 86%	N = 24% S = 14%	N = 56% S = 61%	N = 44% S = 39%
40	All aboriginal land claims will be settled.	N = 76% S = 81%	N = 24% S = 19%	N = 39% S = 34%	N = 61% S = 66%
41	A cure for AIDS will be found.	N = 97% S = 95%	N = 3% S = 5%	N = 73% S = 77%	N = 27% S = 23%
42	Gender roles will become less fixed.	N = 80% S = 78%	N = 20% S = 22%	N = 83% S = 84%	N = 17% S = 16%

Exhibit 2. Northern and southern mean levels of satisfaction and happiness.

<i>On a 7-point scale, satisfaction with:</i>	<i>Northern Mean</i>	<i>Southern Mean</i>
Your house, apartment or mobile home	5.5	5.6
Your neighbourhood as a place to live	5.6	5.6
Your family relations	5.7	5.8
Your living partner	6.0	6.0
Your job	5.1	5.2
How you feel about life as a whole	5.6	5.6
Your friendships	5.6	5.6
Your health	5.3	5.3
Your religion or spiritual fulfilment	5.2	5.2
Your financial security	4.4	4.5
Your recreation activities	4.8	5.0
Your self-esteem	5.3	5.4
Federal government officials	2.6	2.6
Provincial government officials	2.1	2.1
Local government officials	3.4	3.2
Your overall quality of life	5.5	5.5
Your personal safety in your neighbourhood	5.5	5.3
Your happiness with life as a whole	5.8	5.8

Exhibit 3. Average number of good health days in the past 30 days for Americans and British Columbians, by gender and age.*

<i>Age</i>	<i>USA Means</i>		<i>BC ,North Means</i>		<i>BC, South Means</i>	
18-34 yrs	M	25.9 (N=17354)	M	20.4 (N=93)	M	23.4 (N=38)
	W	24.0 (N=22581)	W	20.6 (N=114)	W	22.4 (N=55)
35-49 yrs	M	25.7 (N=19994)	M	23.6 (N=188)	M	23.1 (N=83)
	W	23.9 (N=26751)	W	21.6 (N=160)	W	22.5 (N=66)
50-64 yrs	M	25.1 (N=12158)	M	24.5 (N=173)	M	22.8 (N=91)
	W	23.3 (N=16787)	W	21.6 (N=88)	W	24.8 (N=30)
65+ yrs	M	24.6 (N=9443)	M	24.6 (N=73)	M	21.8 (N=77)
	W	23.2 (N=17606)	W	22.0 (N=39)	W	20.8 (N=43)
Totals	M	25.5 (N=58949)	M	23.5 (N=527)	M	22.7 (N=289)
	W	23.7 (N=83725)	W	21.4 (N=401)	W	22.4 (N=194)

* American data covering the 50 states and Washington, D.C. of the USA were kindly provided by David Moriarty from the CDC Behavioral Risk Factor Surveillance System 1998.

Exhibit 4. Comparison of life satisfaction regressions from 9 surveys

	1979 A ^a	1981 B	1982 C	1984 D	1985/86 E	1997 F	1997 G	1999n H	1999s I
Percent of variance explained in life satisfaction		57	49	53	53	49	64	65	56
	52								
Predictors									
Satisfaction with:	Standardized Regression Coefficients								
Health	.11	.18	.17	.12	.11		b	.17	.15
	.20								
Financial security	.15	-.01	.24	.11	.16		.09	b	.08
	b								
Family relations	.35	.10	.10	.13	.06		.09	.16	b b
Job	.10	c	b	.09	b	.08	.11	.18	.19
Friendships	.20	.08	.07	.17	.08		.07	b	.22
	.29								
Housing	-.05	.21	.10	.12	.12	b	b	.06	.13
Area lived in	b	.01	.13	b	c	b	b	c	c
Recreation activity	.08	.08	.05	.12	.13	b	b	b	b
Religion	c	.13	.07	b	b	b	b	b	b
Self-esteem	.13	.17	.19	.31		.19	.57	.57	.25.19
Transportation	.09	.05	.06	b	.05	b	c	c	c
Gov. services	c	.13	.04	c	c	b	b	c	c
Living partner	c	.06	c	c	.15	.13	b	.17	.10
Education	-.03	c	c	.16		.19	c	c	c c

P<.01, a: A=Clerical staff (N=312), B=Rural seniors (N=273), C=Cochrane residents (N=328), D=Guelph students (N=296), E=world students (N=5107), F=Prince George residents (N=512), G=Jasper residents(N=229), H=B.C. northerners (N=727), I=B.C. southerners (N=356). b: Significance level too low to enter equation. c: Not in questionnaire.

Exhibit 5. Comparison of happiness regressions from 9 surveys

	1979 A ^a	1981 B	1982 C	1984 D	1985/86 E	1997 F	1997 G	1999n H	1999s I
Percent of variance explained in happiness	45	32	36	39	28	38	27	45	47
Predictors									
Satisfaction with:	Standardized Regression Coefficients								
Health b	.12	.12	.18	.17	.09		b	b	.10
Financial security b	.09	.06	.21	b	.13		.14	.19	.09
Family relations b	.38	-.03	.09	.14	.06		.14	b	b
Job	.03	c	.09	.18	b	b	b	.14	.20
Friendships	.23	.23	.01	.21	.10		.09	b	b.21
Housing	.01	-.01	.10	b	.07	b	b	b	b
Area lived in	b	.01	.05	b	c	b	b	c	c
Recreation activity	.03	.04	.05	b	.07	b	b	b	b
Religion	c	.01	.03	b	b	b	b	b	b
Self-esteem .29	.07	.09	.14	.26		.13	.27	.25	.38
Transportation	.05	.05	b	b	b	b	c	c	c
Gov. services	c	.08	.03	c	c	.09	b	c	c
Living partner	c	.30	c	c	.18	.22	.22	.13	.17
Education	-.03	c	c	b	.10	c	c	c	c
Fed.Gov.Off.	c	c	c	c	c	c	c	.10	b
Personal safety	c	c	c	c	c	c	c	.08	.16

P<.01, a: A=Clerical staff (N=312), B=Rural seniors (N=273), C=Cochrane residents (N=328), D=Guelph students (N=296), E=world students (N=5036) , F=Prince George residents (N=466), G=Jasper residents (N=210), H=B.C. northerners (N=713), I=B.C. southerners (N=348). b: Significance level too low to enter equation. c: Not in questionnaire.

Exhibit 6. Variable importance for the British Columbian explanations of life satisfaction, happiness and satisfaction with the overall quality of life.

Life Satisfaction (Exhibit 4)	% of the R-squared attributed to the predictor	
	<i>Northerners</i>	<i>Southerners</i>
<i>satisfaction with:</i>		
friendships	22	31
self-esteem	27	19
job	16	17
health	14	17
living partner	12	6
house or apartment	a	10
financial security	5	a

Happiness (Exhibit 5)	% of the R-squared attributed to the predictor	
	<i>Northerners</i>	<i>Southerners</i>
<i>satisfaction with:</i>		
self-esteem	50	33
job	14	20
living partner	9	13
friendships	a	22
health	9	a
personal safety	6	12
financial security	7	a
federal gov. officials	5	a

Quality of life	% of the R-squared attributed to the predictor	
	<i>Northerners</i>	<i>Southerners</i>
<i>satisfaction with:</i>		
self-esteem	33	19
personal safety	16	20
financial security	9	16
recreation activities	6	16
health	10	9
friendships	7	13
job	9	7
family relations	5	a
federal gov. officials	4	a

a=Beta value significance level too low to enter equation