Sources of Electoral Support for Provincial Political Parties in Urban British Columbia

K. J. MAC DONALD

One of the most popular topics for research by political scientists is the question of the sources of electoral support for the various political parties in a given area. This is only natural, since voting is the most easily observable manifestation of political life in our system, and since there are fairly well-developed theories and sets of data on the general phenomenon. A recent issue of *BC Studies*[1] published several examples of voting behaviour research with respect to provincial voting patterns in British Columbia.

One of the major difficulties with these pieces, as the authors readily admitted, was the lack of good information on which to base inferences, comparisons and generalizations. The best kind of data for voting behaviour studies is survey data, or, better still, survey data garnered from a continuing panel of respondents over a period of time.

Another source of information for the purposes of voting studies is aggregate data, such as the federal census and the official results of elections. The basic problem with this sort of data is that it does not permit a simple cross-comparison of characteristics at the level of the individual voter.

This article is aimed at adding a little more information to the study of voting in British Columbia's provincial elections. The research was completed before the release of the national data compiled by John Meisel, but was able to make use of the survey carried out in Vancouver-Burrard by Jean Laponce. Because Laponce's data are limted to one federal riding at one point in time, the major source of information for this paper was a multiple regression analysis of aggregate 1961 census data, based on urban census tract breakdowns, run against 1960 provincial vote as the dependent variable. Use of this data source allows for a rather broader scope of inference than the Laponce data alone, despite the fact that these data themselves are limited strictly to the metropolitan area of Vancouver-Victoria.

[1] *BC Studies*, Number 12 (Winter 1971-2).

Lurking ominously in the background, though, is the infamous ecological fallacy, first identified by Robinson in 1950. This is a problem which often trips up investigators who attempt to infer individual-level relationships from aggregate-level data.[2] The impact of this criticism of aggregate analysis has been so great that some would argue that

> not only can no valid propositions about the behaviour of individuals be suggested on the basis of aggregate data, but since individuals are not themselves the source of the data no analysis of attitudes, opinions, and cognitions is possible.[3]

Wilson, addressing himself to the Canadian case in particular, replied to this broadside in the following terms, here quoted with approval:

> while it is no doubt a shortcoming of aggregate analysis that it is not able to provide data relating to individual opinions and feelings, where the relationship between various social groups and voting is the primary focus of the analysis, aggregate data obviously have a relevant role.[4]

Two additional factors lead us to contend that it is not a pointless enterprise to attempt an analysis based for the most part on aggregate data in this paper. While there are always nagging doubts that some variable affecting voting which has been left out of the analysis may have had the effect of grouping the data by the dependent variable — thus violating the mathematical assumptions of the regression model and rendering the results meaningless — the fact that the socio-economic data are grouped by census tract whereas the dependent variable, voting, had consequently to be built up from the physically smaller units of the polling subdivisions in order to fit the census tract boundaries probably eliminates this source of error. In effect, the painstaking task of constructing voting units to fit the census units means that there is good reason to suggest that "individuals have been grouped in such a way that their scores on the dependent variable are unrelated to the aggregation in which they fall, except indirectly through their scores in the independent variable."[5] According to Blalock, this "is the single general assumption . . . we must meet . . . if we

[2] For a discussion of the problem, see W. Phillips Shively, " 'Ecological' Inference: The Use of Aggregate Data to Study Individuals," *American Political Science Review*, Vol. 63, No. 4 (December 1969), especially pp. 1183-1190.

[3] Quoted in J. M. Wilson, "The Use of Aggregate Data in the Analysis of Canadian Electoral Behaviour," paper presented at the 1967 CPSA Conference on Statistics, Carleton University, Ottawa, p. 4.

[4] *Ibid.*, p. 5.

[5] Shively, p. 1186.

are to infer individual-level relationships from aggregated data through ecological regression."[6]

In the second place, the Laponce data for Vancouver-Burrard offer some way to check the results of the ecological regressions that are being run for the entire metropolitan area, in that both sets of data are based on the 1960 provincial election.

An initial computer run containing forty-eight independent variables gave a good indication of the sources of multicollinearity, and, after considerable chopping and pruning to eliminate this problem, a statistically acceptable multiple regression run was achieved with fourteen independent variables.[7]

FINDINGS

1. AGE

TABLE 1

ECOLOGICAL REGRESSION

	% 20-34	% 35-54	% 55+
Socred	+.144	+.115	+.367*
CCF	—.022	+.182	—.518*
Liberal	—.050	—.250	+.063
Conservative	—.079	—.057	+.090

*Significant at $p \leqslant .001$[8]

[6] *Ibid.*

[7] Multicollinearity exists when the independent variables are highly correlated with each other. When this happens, it is impossible to determine whether the particular independent variable in question has the relationship indicated by the regression coefficient with the dependent variable, or whether the relationship is really due, in whole or in part, to the invisible variable — the one which is highly correlated with the one the investigator thinks he is dealing with in isolation. For example, if one variable called, say, "university education" correlates strongly with another called, say, "income over $15,000," and the "university educated" variable is run as an independent variable against voting, then it is impossible to tell how "pure" the relationship found by the analysis really is, and how much it has been "contaminated" by the intercorrelation of the income and education variables. The chopping and pruning process is designed to eliminate independent variables which early computer runs indicate are highly correlated with each other, in order to eliminate this problem as much as possible. This process of visually checking independent variable correlations was supplemented by monitoring another statistical indicator called the "determinant." When this latter statistic had reached an arbitrary level, and when the most flagrant causes of multicollinearity had been eliminated by a visual check, then the regression run was deemed acceptable, which is to say, statistically believable.

[8] A significance level of $p \leqslant .001$ means that the result obtained had a probability of having resulted merely from chance of less than one in one thousand. This being the case, it seems safe to say that the result was *not* a product of chance alone, and that there is some reason to regard it as meaningful.

TABLE 2

LAPONCE DATA

	19-33	*34-58*	*59-68*	*69+*	
Socred	13.8	19.7	35.4	33.3	22.9
CCF	14.9	21.2	9.2	15.6	16.2
Liberal	13.8	20.4	13.8	11.1	16.2
Conservative	6.4	8.8	10.8	2.2	7.5
Non-vote	51.1	29.9	30.8	37.8	37.1
	27.2	39.7	18.8	13.0	N=345

The conventional wisdom about British Columbia provincial politics has it that Social Credit derives a large measure of its support from the older age groupings. Our findings support this contention. Table 1 represents the regression coefficients of the independent variable, age (classified as percentage of population in a census tract falling within the respective age groupings), against the dependent variable, voting in the 1960 provincial election. As can be seen, the oldest age category produces the most significant results, and the Social Credit coefficient for this oldest grouping was strongly positive, and significant at the $p \leqslant .001$ level. Conversely, the CCF coefficient for this same grouping was strongly negative, and also significant at $p \leqslant .001$.

The Laponce data for Vancouver-Burrard, found in Table 2, support this finding emphatically, and when the age variable was included in a regression analysis of these same Laponce data, the only party for which the coefficient on age was significant was Social Credit. The regression coefficient for this analysis, not shown above, was significant at the $p \leqslant .01$ level, and indicated rising Social Credit support as the respondents' age increased.

2. RESIDENCY

TABLE 3

ECOLOGICAL REGRESSION

	% of Area Pop. in Residence for 2 Years or Less	*Post-war Immigrants as % of Area Pop.*
Socred	—.099	+.456*
CCF	—.138	—.835*
Liberal	+.181*	—.368
Conservative	+.054	+.020

*Significant at $p \leqslant .01$

Two variables were chosen from the 1961 census to represent the concept of residency. The first was the percentage population of each census tract which had resided there for two years or less. The second consisted of the percentage population of each census tract which had immigrated to Canada since the Second World War.

These variables are not very satisfactory in that they are not sufficiently precise to allow one to determine what exact phenomena are being tapped in each case. For instance, the first variable could be an indicator of social mobility and hence of socio-economic status, but it is impossible to differentiate the specific components which are caught by the variable as presented in the census data. There is also no way to separate out those who entered the census tract from other parts of Canada from those who had immigrated directly from other countries — in other words, there is no way to distinguish between internal and external immigration.

The second variable takes care of the latter problem, but again there is no way to further break down the source of emigration, which would add a great deal of useful information.

Despite these serious drawbacks, the coefficients in Table 3 indicate that the question of length of residency may offer some interesting results for the student of B.C. politics. One reason for suspecting that the first variable may tap some notion of upward mobility through its measure of residential mobility is that the only significant coefficient was the positive one associated with Liberal voting. The only other positive coefficient was associated with Conservative voting. As will be seen later, these coefficients follow the pattern established by measures of socio-economic status.

The other variable, taking the percentage of post-war immigrants in the census tract population, offers some more well-defined results. The Social Credit and CCF coefficients, both significant at $p \leqslant .01$, and moving in opposite directions, may reflect the degree to which Social Credit has become entrenched as the "government" party on the provincial scene. For the bulk of the post-war immigrants, the Socred government is the only provincial government they have known, and the coefficients in Table 3 may indicate a strong tendency for recent arrivals in the political system to reinforce the political alignments that they find upon their arrival. Clearly, these hints of results encourage the further investigation of attitudes that only survey analysis can tap.

3. RELIGION

TABLE 4

ECOLOGICAL REGRESSION

	% *Baptist*	% *Presbyterian*	% *Catholic*	% *Other Rels.*
Socred	+.204	—.342	—.537*	—.070
CCF	—.224	—.177	+.340	—.367
Liberal	+.103	+.286	+.219	+.459
Conservative	—.091	+.236	—.030	—.025

*Significant at $p \leqslant .01$

TABLE 5

LAPONCE DATA

	Cathol.	*Anglic.*	*Luth.*	*United*	*Presb.*	*Bapt.*	*Other*	
Socred	19.3	28.2	11.8	25.0	30.4	50.0	17.4	23.1
CCF	22.8	14.1	17.6	11.8	17.4	—	19.8	16.6
Liberal	22.8	11.5	11.8	20.6	8.7	12.5	14.0	15.7
Conserv	5.3	14.1	11.8	5.9	4.3	—	3.5	7.1
No vote	29.8	32.1	47.1	36.8	39.1	37.5	45.3	37.4
	16.9	23.1	5.0	20.2	6.8	2.4	25.5	N=337

With the religious variables, there are some slightly unexpected results. The findings of the ecological regression and the Laponce data both indicate, unsurprisingly, that Social Credit strength among Baptist voters is strong. If the denominations of Laponce's study could be scaled according to some idea of high-to-low church, they would conceivably appear in the order shown in Table 5. When this scaling was used in a regression on Laponce's data, Social Credit voters again showed a tendency to be clustered at the low-church end of the scale, but the coefficient was not statistically significant. All of these findings back up Laponce's earlier analysis of federal voting behaviour, which "confirms the link between religious fundamentalism and the western brand of Social Credit."[9]

One rather unanticipated finding was the positive relationship between CCF vote and Catholicism. Most national studies show that Catholics

[9] J. A. Laponce, "Ethnicity, Religion, and Politics in Canada: A Comparative Analysis of Survey and Census Data," in Mattei Dogan and Stein Rokkan, *Quantitative Ecological Analysis in the Social Sciences*, (Cambridge, Mass.: The MIT Press, 1969), p. 213.

tend to support the Liberals, and, in Quebec, the Creditistes, but not the NDP.[10] The census data regression, on the other hand, indicates a rather strongly positive relationship between Catholic voters and the CCF, and the Laponce data in Table 5 also shows that the CCF claim a very respectable share of the Catholic vote. That these two findings may not be accidental is suggested by Laponce's national study, in which he notes that while nationally "[t]he NDP's success is negatively correlated in the metropolitan centres to Catholicism, . . . a regional analysis shows that the negative correlation with Catholics disappears in British Columbia . . . "[11]

Socred vote in the West, on the other hand, shows a strongly negative relationship with Catholicism, a finding which Laponce felt is "a further indication of the homogeneous Protestant character of that party in the West. . . . "[12] Our census data regression confirms this relationship most emphatically. The negative coefficient for Catholicism on Social Credit vote is significant at $p \leqslant .01$, as shown in Table 4.

4. ETHNICITY

TABLE 6

ECOLOGICAL REGRESSION

	German and Scandinavian Origin	*British Origin*
Socred	—.009	+.185
CCF	+.521	—.555*
Liberal	—.442	+.330°
Conservative	—.070	+.037

*Significant at $p \leqslant .01$ °Significant at $p \leqslant .02$

TABLE 7

LAPONCE DATA

	British	*German*	*Other Eur.*	
Socred	23.1	23.5	34.2	23.7
CCF	16.4	16.7	15.8	16.5
Liberal	16.4	17.6	17.1	16.5
Conservative	8.4	5.9	6.6	7.5
No vote	35.6	23.5	34.2	35.7
	67.6	5.1	22.8	

[10] See, for example, Peter Regenstreif, *The Diefenbaker Interlude: Parties and Voting in Canada*, (Toronto: Longmans Canada, 1965), pp. 37, 38, 104.

[11] Laponce, in Dogan and Rokkan, p. 212.

[12] *Ibid.*, p. 213.

The major voting bloc in British Columbia is the group of Canadians of British origin, which makes up around two-thirds of the population. The regression coefficients found in Table 6 show that the CCF does not do particularly well with this crucial segment of the electorate. By contrast, the other three parties do fairly well with this group, and the Liberals would seem to be the principal beneficiaries of any increase in the proportion of British-origin voters in any particular census tract.

The Liberals, however, fare rather badly with another important group of voters, those of German and Scandinavian origin. Here, the CCF do better than any of the other parties. On the particular question of Scandinavian-origin voters, Laponce offers some support for the result of our census data regression, noting that the Liberals do very poorly with this section of the electorate on the national scene.[13]

Part of the results of Laponce's survey of voters in Vancouver-Burrard are displayed in Table 7. They do not offer much support for the findings of the ecological regression in the only category which is strictly comparable, that of voters of British origin. In Laponce's sample, the parties received support from each ethnic group in rather uniform fashion, with the exceptions of the over-representation of British-origin voters in the Conservative column, and of "other-European origin" voters in the Socred column.

5. EDUCATION

TABLE 8

ECOLOGICAL REGRESSION

	Elementary Education	*University Education*
Socred	+.033	—.519*
CCF	+.135	+.261
Liberal	—.067	—.123
Conservative	—.104	+.361°

*Significant at $p \leqslant .01$

°Significant at $p \leqslant .001$

[13] *Ibid.*, p. 212.

TABLE 9

LAPONCE DATA

	Elem.	*Jr. Hi.*	*Sr. Hi.*	*Univ.*	
Socred	26.0	29.2	21.9	20.0	23.8
CCF	16.0	22.2	17.1	8.3	16.5
Liberal	18.0	9.7	18.5	18.3	16.5
Conservative	8.0	9.7	6.2	8.3	7.6
No vote	32.0	29.2	36.3	45.0	35.7
	15.2	22.0	44.5	18.3	N=328

The education variable was another which produced some mild surprises. The conventional wisdom would lead us to expect a fairly consistent distribution of Social Credit support, with a slight bulge at the lower end of the educational scale. The same would apply to the CCF, with perhaps a larger bulge. Liberal and Conservative support would be expected to cluster more at the high-education end of the scale. Table 9, which shows the results of Laponce's Vancouver-Burrard survey, tends to corroborate these predictions, and the same pattern is backed up in Laponce's national ecological analysis.[14]

As Table 8 indicates, the signs of the coefficients for the elementary education variable are as expected as well, with Social Credit and CCF showing a positive relationship, Liberals and Conservatives a negative one. On the university education variable, however, the strong negative relationship with Socred vote ($p \leqslant .01$) is a little surprising given the rest of the data, as is the fairly strong positive coefficient in the CCF equation. The Socred coefficient in our data could perhaps be rationalized on the basis of the common belief in Social Credit's anti-intellectualism, but it is still somewhat puzzling in the light of some contradictory survey findings showing "a relatively high proportion of university-trained among the Social Credit electorate."[15]

A much more interesting feature is found in Table 9, in the form of the positive relationship between non-voting and education. This finding violates the results of most of the voting behaviour literature, which suggests that higher political information and interest accompany higher education, and predicts on these grounds that the most highly educated

[14] *Ibid.*, pp. 212-3.

[15] Jean A. Laponce, *People vs. Politics*, (Toronto: U. of Toronto Press, 1969), p. 169.

sectors of the electorate will be the most likely to participate in elections.[16] It is also contrary to the behaviour of this same Laponce sample group in the 1962 *federal* election, for which the non-voting rate remains fairly constant across educational categories at around 25%.

The question that these data raises is whether this phenomenon is general or specific to the British Columbia case. Van Loon offers some evidence that it is more generalized within Canada, when he shows that the proportion of highly-educated voters who claim to have voted in all federal elections is 69%, whereas the proportion of these same respondents who claim to have voted in all provincial elections plummets to 38%.[17] On the basis of these data, we may suggest that highly-educated voters perceive the federal political system as being much more important than the provincial system, which has to deal with such things as roads, municipal services, and so on.

Another aspect of the problem may be more peculiar to the British Columbia system, however. Black suggests that "the present government [of British Columbia] represents an institutionalized protest against established social elites of all kinds," and he then goes on to say:

> The inability of such groups to secure the desired hearing and appropriate action accounts for the frequent charges that Mr. Bennett is "undemocratic"; the charges are characteristically made by members of the Union of British Columbia Municipalities, the Teachers' Federation, the Chambers of Commerce, the University community, the wildlife federation, and labour groups.[18]

In a system in which the dominant party has the image of being anti-intellectual, anti-expert, and anti-elite, and in which open supporters of Social Credit are difficult enough to find among the middle classes, let alone among the highly-educated "elite," it may be the case that those who would normally be expected to be the most active participants in political life simply vacate the hostile provincial political arena altogether, and save their energy and interest — to a degree even more pronounced than that which would be suggested by Van Loon's data — for the more hospitable atmosphere of federal politics.

[16] See, for example, Angus Campbell, Converse, Miller and Stokes, *The American Voter*, (New York: John Wiley & Sons, 1964), esp. p. 252.

[17] R. Van Loon, "Political Participation in Canada: the 1965 Election," *Canadian Journal of Political Science*, Vol. III (September 1970), pp. 385-6.

[18] Edwin R. Black, "British Columbia: The Politics of Exploitation," in R. A. Shearer (ed.), *Exploiting our Economic Potential: Public Policy and the British Columbia Economy*, (Toronto: Holt, Rinehart and Winston of Canada, 1968), p. 31.

6. INCOME

TABLE 10

ECOLOGICAL REGRESSION

	Head of Family's Income in $
Socred	+0.205*
CCF	—1.420°
Liberal	+0.543
Conservative	+0.671†

*Significant at p⩽.01
°Significant at p⩽.05
†Significant at p⩽.02

TABLE 11

LAPONCE DATA

	Lower Working	*Middle Working*	*Upper Working*	*Lower Middle*	*Middle Middle*	*Upper Middle*	
Socred	19.2	22.2	20.0	28.4	22.5	12.5	23.1
CCF	23.1	27.2	26.7	9.1	2.5	—	17.5
Liberal	7.7	12.3	16.7	19.3	10.0	25.0	14.9
Conserv	11.5	4.9	6.7	6.8	15.0	12.5	7.9
No Vote	38.5	33.3	30.0	36.4	50.0	50.0	36.6
	8.6	26.7	19.8	29.0	13.2	2.6	N=303

As Table 10 indicates, the multiple regression analysis using census data resulted in the finding that "head of family's income in dollars" was a variable which tended to buttress the arguments of those who contend that class continues to play an important role in provincial voting behaviour in British Columbia. The regression coefficient for CCF vote was —1.420, significant at the p⩽.05 level. This statistic means that for every $100 rise in the average income of family heads in a given census tract, we would expect to find a drop of 1.42% in the CCF's share of the vote. The coefficient for Socred vote was +.205, indicating that for every $100 rise in average family head's income, we would predict a rise of one-fifth of one per cent in the Social Credit vote for that census tract. The Liberal and Conservative coefficients are +.543 and +.671 respectively, and the latter figure is significant at p⩽.02. These statistics all seem to be in line

with the view that class voting is still an important factor, especially in the case of the CCF.

The breakdown of Laponce's Vancouver-Burrard sample, shown in Table 11, would tend to confirm these findings. And when the scaling shown in Table 11 was used in a regression analysis of the Laponce data, the census data regression results were further supported. The coefficient with CCF vote indicated decreasing CCF support as we move up the scale from the lower working class to upper middle class, and the statistic was significant at the $p \leqslant .01$ level. The Liberal coefficient ran in the opposite direction, and the other two were close to zero.

On the question of non-voting, it should not be surprising that Laponce's sample in Table 11 also shows rising non-participation as socio-economic status increases, since education and SES are so closely linked. As it turns out, this measure of SES washes out most of the ethnic pattern found earlier in Laponce's data, giving one more reason for suggesting that those who argue for the importance of class in provincial voting behaviour are on the right track.

CONCLUSIONS

At the outset, it is necessary to stress again the limitations of this analysis. It is based on aggregate data analysis, and employs the techniques of ecological regression which, as was noted above, can be fraught with danger. It is supplemented by a sample survey carried out in one federal riding at once point in time. Also, it is limited to the urban centres of Vancouver and Victoria, and does not pretend to deal with the important rural vote.

Having said all this, however, the advantages still seem to outweigh the disadvantages of this approach — which may be another way of saying that half a loaf is usually better than none. At present, students of the political scene in British Columbia have to take what is available, and try to make do with that while they await the gathering of survey data that will enable them to get a better grip on the problems they face.

The uses of this present sort of analysis are, first, that there are very few sources of survey data available for the study of the past two decades of Social Credit hegemony, and, secondly, that interesting problems may be identified in order to guide those who will be constructing survey instruments for the study of British Columbia's politics in the future.

The results of this particular set of data indicate that class voting is an important phenomenon in British Columbia, and that CCF support is

more concentrated at the lower end of the spectrum, Socred support fairly evenly distributed but with a slight bulge in the middle-class sections.

The non-voting findings of Laponce's survey are quite astounding from the point of view of the vast bulk of the voting behaviour literature. Some most interesting attitudinal questions could be framed concerning this issue in future questionnaires.

One point of general agreement in the field exists: there is a crying need for more survey research. At present, we are like the legendary committee of blind men assigned the task of describing the elephant: we cannot do much better unless we have more attitudinal survey information to help us.