Context and Francophone Support
for the Sovereignty of Quebec:
An Ecological Analysis

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In the final decades of the twentieth century, and on into the twenty-first, Quebec's status has been at the centre of political debate in Canada, yet mass opinion on the issue remains difficult to gauge. The same citizenry who only narrowly failed to pass a sovereignty referendum in 1995, for example, routinely express overwhelming satisfaction with life in Canada—two messages that seem difficult to reconcile.[1] Nor is public inconsistency entirely to blame. Politicians and activists often obfuscate the meaning of sovereignty, since opinion shifts depending upon how this complex issue is framed.[2] The stream

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1 Maurice Pinard, "Les déterminants psychosociaux," in Maurice Pinard, Robert Bernier and Vincent Lemieux, eds., *Un combat inachevé* (Sainte-Foy: Presses de l'Université du Québec, 1997), 338-45.
2 Earl H. Fry, *Canada's Unity Crisis: Implications for U.S.-Canadian Economic Relations* (New York: Twentieth Century Fund, 1992), 28; Richard Johnston, André Blais, Elisabeth Gidengil and Neil Nevitte, *The Challenge of Direct Democracy: The 1992 Canadian Referendum* (Montreal: McGill-Queen's University Press, 1996), 196-97; and Hudson Meadwell, "The Politics of Nationalism in Quebec," *World Politics* 45 (January 1993), 225.

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of ambiguous public information has taken its toll. Many voters in Quebec's sovereignty referendum in 1995, for example, wrongly thought that Quebec would remain part of Canada and continue to send representatives to the federal parliament in Ottawa if it passed.[3] In light of this sort of confusion and uncertainty, it is not entirely clear what any particular expression of preferences really means.

Superficially, the sovereignty movement might appear a prime example of "symbolic politics," of the sort found to dominate ethnic relations in the United States.[4] Supporters believe that continued survival of the French fact in North America necessitates separation of Quebec from the rest of Canada, so the desire to weaken political ties inevitably invokes a voter's perception of threat, around which much work in the social psychology of inter-group relations revolves.[5] If desire for sovereignty is primarily a psychological phenomenon, demand for sovereignty would respond to the character and upbringing of individual francophone voters, and self-interest would play little role.[6]

Interestingly, contextual effects heretofore have received little attention despite the likely relationship between geographic context and self-interest. If self-interest matters, then context would have a disparate impact on support for sovereignty across Quebec, with the costs and benefits structured geographically. Action based upon self-interest rather than on symbolic politics would not be particularly difficult for self-regarding voters, should such exist, and would reveal itself in contextual voting patterns. Thus Quebec provides a valuable opportunity to test theories of ethnic conflict outside the arenas in which they were developed.[7] Determining which contexts enhance francophone desire for sovereignty will also make a useful contribu-

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3   Pinard, "Les déterminants psychosociaux," 345-53.

4   It is worth noting, however, that some scholars question whether the symbolic politics model even applies to the US case. See Lawrence Bobo, "Group Conflict, Prejudice, and the Paradox of Contemporary Racial Attitudes," in Phylis A. Katz and Dalmas A. Taylor, eds., *Eliminating Racism: Profiles in Controversy* (New York: Plenum, 1988), 85-114; and D. Stephen Voss, "The Rational Basis of Symbolic Racism," paper presented at the annual meeting of the Midwest Political Science Association, Chicago, 1999.

5   Fry, *Canada's Unity Crisis*, 28-34; Thomas F. Pettigrew, "New Black-White Patterns: How Best to Conceptualize Them?" *Annual Review of Sociology* 11 (1985), 329-46.

6   Donald R. Kinder and Lynn M. Sanders, *Divided by Color: Racial Politics and Democratic Ideals* (Chicago: University of Chicago Press, 1996).

7   For the main exception, see Pierre Drouilly, *Indépendance et démocratie: Sondages, élections et référendums au Quebec 1992-1997* (Montréal: Harmattan, 1997). Paul Nesbitt-Larking has examined the impact of context on support for protest parties in English Canada ("The 1992 Referendum and the 1993 Federal Election in Canada: Patterns of Protest," paper presented at the annual meeting of the Canadian Political Science Association, Calgary, 1994).

Abstract. New techniques of ecological inference are utilized to estimate with confidence intervals francophone support in each federal electoral district in Quebec for the pro-sovereignty side in the 1993 and 1997 Canadian general elections and the 1992 and 1995 referenda. Analyzing the link between demographic and political contextual variables and support for the sovereignty of Quebec suggests that demographic factors, such as the proportion of farmers and government workers, influence francophone voting behaviour more often than political factors such as incumbency. Unlike in many other countries with ethnically based movements, francophone support for sovereignty actually rises as the francophone portion of the population rises. This finding indicates that the contact hypothesis probably applies to the Quebec sovereignty movement.

Résumé. Les nouvelles techniques d'inférence écologique sont utilisées ici pour estimer avec fiabilité les écarts de l'appui francophone au camp souverainiste, dans les circonscriptions électorales fédérales du Québec, lors des élections générales canadiennes de l993 et l997 et les référendums canadien de l992 et québécois de l995. L'analyse de la relation entre les variables contextuelles démographiques et politiques d'une part, et l'appui à la souveraineté du Québec d'autre part, suggère que les facteurs démographiques, tels la proportion d'agriculteurs et de fonctionnaires, influencent plus souvent le comportement électoral des francophones que les facteurs politiques tels les mandats politiques. Contrairement à ce qui se passe dans plusieurs pays où existent des mouvements ethniques, l'appui des francophones à la souveraineté augmente lorsque le poids démographique des francophones croît. Ce constat indique que l'hypothèse du contact s'applique probablement au cas du mouvement souverainiste québécois.

tion to the more general question of which social conditions exacerbate cultural conflict.

The Quebec case is especially useful because the sovereignty issue was implicated in several elections. Quebeckers had an unusually high number of opportunities to express themselves on sovereignty at the polls between 1992 and 1997: the referendum on the constitutional Charlottetown Accord in 1992, against which sovereignists campaigned; the federal elections of 1993 and 1997 contested by the sovereignist Bloc Québécois; and the 1995 sovereignty referendum promoted by the Parti Québécois.[8] The rapid recurrence of this issue in so many guises aids an analysis of voter preferences, since the noise in any one vote washes out, allowing a concentration on patterns that remain constant.

Supporters and opponents agree that sovereignty has certain clear implications for Quebec. In particular, it means that the Quebec government will be strengthened, and the influence of the federal government in Ottawa reduced, if not eliminated. Quebec City, not Ottawa, will have the final say over public policy. Attentive voters should be able to weigh the stakes. Any systematic pattern found in all four election results should reflect voter impulses on this federalism issue,

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8 Jonathan Lemco, *Turmoil in the Peaceable Kingdom: The Quebec Sovereignty Movement and Its Implications for Canada and the United States* (Toronto: University of Toronto Press, 1994), 49-53. Quebeckers could also support sovereignty by voting for the PQ in the 1994 provincial elections for the Assemblée nationale. The analysis excludes this election because of the absence of data.

rather than any intervening source of variation such as partisan loyalties, strategic voting or ballot confusion. This article therefore takes advantage of returns from the four campaigns to analyze links between local context and support for sovereignty within Quebec.

Obviously we cannot study patterns of francophone voting unless we have a means to determine how francophones voted. For this purpose, we use an ecological inference technique that can estimate voting behaviour by primary language, not just for all of Quebec but also for each of its ridings.[9] These estimates allow us to concentrate on variation in francophone voting, as required for an understanding of contextual group relations.[10]

Our results reveal that the demographic character of a locality consistently influences sovereignty support levels. They imply that self-interest drives voting behaviour on sovereignty, at least when interest is measured contextually; ethnicity does not trump all other personal concerns. However, a community's ethnic balance does shape francophone attitudes. Voters show less sympathy with sovereignty when they reside in ridings with a linguistic mix, consistent with the ''contact hypothesis'' that others have applied to Canada.[11] These results validate work by other scholars, particularly Pierre Drouilly, using different methods

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9   Gary King, *A Solution to the Ecological Inference Problem: Reconstructing Individual Behavior from Aggregate Data* (Princeton: Princeton University Press, 1997); and D. Stephen Voss and David Lublin, ''Ecological Inference and the Comparative Method,'' *APSA-CP: Newsletter of the APSA Organized Section in Comparative Politics* 9 (1998), 25-31.

10 Most geographic comparisons of support for sovereignty do not control for ethnicity, so it is difficult to determine if ethnicity or other factors explain regional differences in support for sovereignty. See Leo Driedger, *Multi-Ethnic Canada, Identities and Inequalities* (Toronto: Oxford University Press, 1996). That is, aggregation conflates ethnicity with other contextual influences on the vote. We focus on francophones, and strip out anglophones and allophones, since they almost uniformly oppose sovereignty, and there is not sufficient geographical variation for contextual study. See André Blais and Richard Nadeau, ''To Be or Not to Be Sovereignist: Quebeckers' Perennial Dilemma,'' *Canadian Public Policy* 18 (1992), 90-91; Drouilly, *Indépendance et démocratie*, 286-92; Fry, *Canada's Unity Crisis*, 31-34, 39; and Maurice Pinard, ''Le contexte politique et les dimensions sociodémographiques,'' in Maurice Pinard, Robert Bernier and Vincent Lemieux, eds., *Un combat inachevé* (Sainte-Foy: Presses de l'Université du Québec, 1997), 307-13. Drouilly and Pinard estimate that support for sovereignty among anglophones and allophones was not greater than 5-10 per cent in either 1980 or 1995. Most First Nations Canadians opposed sovereignty, though approximately one quarter of the Abénaquis and Hurons, who are more likely to speak French as their second language, voted in favour.

11 See, for example, J. W. Berry, ''Cultural Relations in Plural Societies: Alternatives to Segregation and Their Sociopsychological Implications,'' in Norman Miller and Marilynn B. Brewer, eds., *Groups in Contact: The Psychology of Desegregation* (Orlando: University Press of America, 1984), 11-27.

and alternate levels of aggregation. The results contradict the popular ''power threat hypothesis,'' a common approach to inter-group relations that suggests proximity should fuel group conflict.[12]

Estimating Francophone Support for Sovereignty

Four campaigns between 1992 and 1997 called on Quebec's voters to express their preferences on sovereignty. Adoption of the Charlottetown Accord in 1992 would have signaled acceptance of the 1982 *Constitution Act* and foreclosed sovereignty as an option, although not everyone opposing the Accord supported sovereignty.[13] The 1993 and 1997 federal elections also had major implications for sovereignty, even if they were not directly on the issue. Some non-sovereignists undoubtedly supported the BQ, perhaps to place pressure on Ottawa, but defeat for the BQ at the polls would have represented a major setback for the sovereignty movement.[14] The 1995 referendum, meanwhile, dealt with sovereignty directly, even if voters did not always understand precisely in what manner.[15] Voting behaviour in each election therefore might include sources of variation other than support for political separation from Canada, but these differed in each election, so any pattern that persists in all four votes presumably reflects the process governing support for sovereignty itself.

Actual ballots are secret, so we cannot identify the demographic characteristics of each voter. Analyzing the effect of context on francophone voting requires some method of estimation, and no approach is perfect. Surveys might seem to be the natural choice, since generally one knows the personal characteristics of each respondent. However, they also present clear disadvantages. Leaving aside the usual complications with question wording, interviewer effects and response bias, surveys also do not facilitate contextual studies because they contain too few voters from each electoral district, creating excessive sampling error within any one context.[16] Contextual studies using sur-

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12 Micheal W. Giles and Arthur S. Evans, ''The Power Approach to Intergroup Hostility,'' *Journal of Conflict Resolution* 30 (1986), 469-86.

13 Johnston et al., *The Challenge of Direct Democracy*, 192-93.

14 Blais and Nadeau, ''To Be or Not to Be Sovereignist,'' 90; and Donald Charette, '' 'Le choix est clair:' Pour Duceppe, le résultat de l'élection vient d'anéantir les espoirs des fédéralistes,'' *Le Soleil* (Quebec City), June 3, 1997.

15 Pinard, ''Les déterminants psychosociaux,'' 343-53.

16 Researchers who analyze data on support for sovereignty have been laudably forthcoming about the limitations of survey data. Blais and Nadeau provide a valuable discussion of the complications (''To Be or Not to Be Sovereignist,'' 90-91). It is worth noting that, aside from the methodological difficulties discussed elsewhere, aggregate data studies suffer real substantive limitations. They cannot include variables such as gender, lacking real geographical variation. Nor

veys are forced to fall back upon multilevel models, which pose
known drawbacks, including steep data demands that usually rule out
complex multivariate models of the sort we need here.[17] For this rea-
son, we chose to use aggregate data for our contextual analysis.

Aggregation Bias and Contextual Research

We do not know how francophones voted, either within individual rid-
ings or in Quebec as a whole. On the other hand, we do know overall
voter preferences in each of 75 federal ridings, as well as the linguistic
breakdown. The challenge of ecological inference is to estimate how
each linguistic group behaved according to how riding support for
sovereignty varied with a group's share of the population.[18] This is a
risky venture, since an unfortunate pattern of aggregation could produce
deceptive correlations between group density and voting behaviour.[19]

However, an ecological inference programme developed by Gary
King, called EI, surmounts most of the pitfalls common to ecological
inference. King's approach allows voting estimates by linguistic cate-
gory not only for Quebec as a whole, but also for individual federal
ridings, and with confidence intervals around each estimate.[20] EI
avoids imposing specific assumptions about how any group behaved,
either within or across ridings, instead only requiring distributional
assumptions about the process governing voting. It is able to handle

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can they explore the correlations among distinct political attitudes, since each
person's opinions are conflated into a single vote.

17   Anthony S. Bryk and Stephen W. Raudenbush, *Hierarchical Linear Models:
     Applications and Data Analysis Methods* (Newbury Park: Sage, 1992); and
     Marco R. Steenbergen and Bradford S. Jones, "Modeling Multilevel Data Struc-
     tures," paper presented at the annual meeting of the Political Methodology
     Group, Columbus, Ohio, 1997.

18   Although some non-sovereignists vote for the BQ and some sovereignists voted
     for other parties, "support for sovereignty" is used throughout as a shorthand for
     support for the pro-sovereignty position in each of the four elections.

19   Christopher H. Achen and W. Phillips Shively, *Cross-Level Inference* (Chicago:
     University of Chicago Press, 1995); Brad Palmquist, "Ecological Inference,
     Aggregate Data Analysis of U.S. Elections, and the Socialist Party of America"
     (unpublished Ph.D. dissertation, University of California at Berkeley, 1993); and
     W. S. Robinson, "Ecological Correlations and the Behavior of Individuals,"
     American Sociological Review 15 (1950), 351-57.

20   The choice of federal ridings as our lower-level unit of aggregation is not obvi-
     ous, since the 1995 referendum was conducted using provincial ridings. How-
     ever, using electoral districts is only a data convenience, a proxy for the swirl of
     local interests and influences that would affect someone's vote. Any approach
     naturally introduces some noise, and there is no particular reason why the elec-
     torally relevant riding would capture the demographic context better than an elec-
     torally irrelevant one. More practically, data for all demographic variables in the
     analysis were not available for the provincial ridings.

the greater across-riding variation among francophone preferences compared to those of other Quebeckers (that is, heteroskedasticity). It prevents absurd estimates of behaviour, such as rates of support for sovereignty that fall below 0 per cent, that other forms of estimation would find.[21]

The most important advance of King's method, though, is that it is partially robust to "aggregation bias." If individual voting behaviour is somehow related to a community's linguistic composition, as most theories of inter-group relations would predict, then other popular forms of ecological inference (for example, Goodman's ecological regression, homogeneous unit analysis) would be facially invalid. Given our specific interest in contextual effects, those other methods would also be useless unless significantly altered, and at any rate should not perform as well as King's solution.[22]

The key to King's success derives from the "method of bounds." For each riding, EI begins by identifying the complete set of values that might describe voting behaviour. The obvious first limit is that turnout rates for each linguistic group must fall between 0 per cent and 100 per cent, but the range of possible values is actually much narrower. Using Quebec itself as an example, 4.7 million people voted in 1995, and only 1.1 million people in Quebec are members of linguistic minorities, so at least 3.6 million francophones must have voted. That is, the "lower bound" on francophone turnout is about 61.5 per cent. The upper bound is 81.1 per cent. Even if no linguistic minorities voted, at most 4.7 million of the 5.8 million francophones could have turned out.

Such bounds, when applied to each riding, do a great job constraining voting estimates. Furthermore, if the range of possible values shifts as the linguistic context shifts, there is strong evidence of aggregation bias—that is, strong evidence that francophone voting responds to the

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21   We have evaluated the benefits of King's solution much more thoroughly elsewhere. See D. Stephen Voss, "Familiarity Doesn't Breed Contempt: The New Geography of Racial Politics" (unpublished Ph.D. dissertation, Harvard University, 2000), chap. 7; and D. Stephen Voss and David Lublin, "Black Incumbents, White Districts: An Appraisal of the 1996 Congressional Elections," *American Politics Quarterly* 29 (2001), 141-82. We also provide much more detail on how his method would be applied to Quebec, showing how other methods of ecological inference produce impossible estimates and how King's approach clearly captures aggregation bias that those other methods do not (Voss and Lublin, "Ecological Inference and the Comparative Method").

22   Achen and Shively, *Cross-Level Inference*; James E. Alt, "Persistence and Change in Southern Voter Registration Patterns, 1972-1990," paper presented to the Workshop on Race, Ethnicity, Representation and Governance, given by the Center for American Political Studies of Harvard University Government Department, Cambridge, Massachusetts, 1993; Voss, *Familiarity Doesn't Breed Contempt*, chap. 7; and Voss and Lublin, "Ecological Inference and the Comparative Method."

linguistic mix of the riding.[23] King's EI is able to pick up the pattern and apply it when computing voting estimates for each riding, preserving at least some of the meaningful contextual variation. Having to take into account this additional complication naturally adds uncertainty to the riding estimates, but we can evaluate how much once the estimates are in hand. Furthermore, to whatever extent EI consistently underestimates aggregation bias,[24] it would only weaken the apparent contextual effects, not create significant contextual findings.

Ecological Estimates for Four Campaign Outcomes

We performed an ecological analysis for each of the four contests, using data on the proportion of francophones in the population from the 1991 Census.[25] We prompted the software to model aggregation bias, where present, so that the estimates would be sensitive to contextual voting among francophones.[26]

   Table 1 shows the estimated proportion of francophones voting against the Charlottetown Accord in the 1992 referendum and for the Bloc Québécois in the 1993 federal election, as well as confidence intervals around these estimates for the riding boundaries used in 1993. Table 2 similarly presents estimates and confidence intervals around these estimates of proportion of francophones voting for sovereignty in the 1995 referendum and for the BQ in the 1997 general election in the riding boundaries in place in 1997.[27] The size of the confidence intervals around the estimates is generally very small. The median size of 95 per cent confidence intervals for the federal elections is .013 for 1993 and .018 for 1997. The median size of the same confidence intervals for the referenda is .025 in 1992 and .018 in 1995. Although the confidence intervals for some ridings are considerably larger, the majority of ridings in all elections have very small confidence intervals that permit a high degree of certainty about estimated francophone support for the pro-sovereignty position.

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23   It does not provide evidence, however, that context *causes* the shifts.
24   Wendy Tam Cho, ''Iff the Assumption Fits . . . : A Comment on the King Ecological Inference Solution,'' *Political Analysis* 7 (1998), 143-63.
25   Munroe Eagles, James P. Bickerton, Alain-G. Gagnon and Patrick Smith, *The Almanac of Canadian Politics* (Toronto: Oxford University Press, 1995); *Profile of Federal Electoral Districts—Parts A and B* (Ottawa: Statistics Canada, 1992).
26   Exact globals were, for 1993's first stage, _Eeta=1, _EalphaB=(0˜.15). For 1992 we added _Estval=(0|0|-2|-2|-2|0). The second stage for 1995 also added _Eisfac=2. For 1997's second stage we used _Eeta=3, _EalphaB=(0˜.15), _EalphaW=(0˜.15), _Estval=(-0.2|0|-1|.1|-2|-2|-.2). The remaining analyses used basic EI. Replication buffers are available from the authors.
27   No data are available on the results of the 1992 referendum in the 1997 riding boundaries. Similarly, data are unavailable on the results of the 1995 referendum or the 1997 federal election within the 1993 boundaries.

TABLE 1

Proportion of Francophones Supporting the BQ in 1993 and Opposing the 1992 Charlottetown Accord in the Riding Boundaries of 1993

Riding	Proportion French Home Language	For the BQ in 1993			Opposed to the Charlottetown Accord 1992		
		95% CI Lower Bound	Estimate	95% CI Upper Bound	95% CI Lower Bound	Estimate	95% CI Upper Bound
Abitibi	.840	.541	.548	.550	.740	.762	.773
Ahuntsic	.720	.605	.621	.626	.618	.639	.654
Anjou-Rivière-des-Prairies	.728	.576	.588	.592	.591	.624	.640
Argenteuil-Papineau	.879	.534	.537	.538	.649	.661	.668
Beauce	.995	.364	.364	.364	.551	.552	.552
Beauharnois-Salaberry	.869	.583	.589	.591	.667	.679	.685
Beauport-Montmorency-Orléans	.991	.582	.582	.582	.676	.677	.677
Bellechasse	.997	.408	.408	.408	.578	.580	.579
Berthier-Montcalm	.962	.631	.633	.633	.676	.680	.682
Blainville-Deux-Montagnes	.903	.652	.656	.658	.710	.718	.723
Bonaventure-Îles-de-la-Madeleine	.871	.380	.383	.385	.550	.561	.567
Bourassa	.786	.525	.532	.534	.598	.618	.629
Brome-Missisquoi	.784	.507	.517	.520	.587	.600	.609
Châteauguay	.825	.690	.700	.703	.728	.751	.764
Chambly	.904	.654	.659	.660	.677	.685	.690
Champlain	.970	.502	.503	.503	.656	.659	.660
Charlesbourg	.984	.603	.603	.604	.661	.662	.663
Charlevoix	.972	.636	.637	.638	.687	.690	.691
Chicoutimi	.990	.645	.645	.645	.739	.740	.740
Drummond	.986	.556	.557	.557	.642	.643	.644

TABLE 1 (CONTINUED)

Riding	Proportion French Home Language	For the BQ in 1993			Opposed to the Charlottetown Accord 1992		
		95% CI Lower Bound	Estimate	95% CI Upper Bound	95% CI Lower Bound	Estimate	95% CI Upper Bound
Frontenac	.986	.592	.592	.592	.622	.623	.624
Gaspé	.933	.482	.484	.484	.629	.633	.637
Gatineau-La Lièvre	.905	.387	.389	.390	.457	.465	.468
Hochelaga-Maisoneuve	.900	.677	.681	.682	.719	.731	.737
Hull-Aylmer	.766	.340	.352	.355	.484	.496	.504
Joliette	.988	.670	.671	.671	.726	.727	.728
Jonquière	.990	.682	.683	.683	.783	.784	.785
Kamouraska-Rivière-du-Loup	.998	.530	.530	.530	.627	.627	.627
Lévis	.991	.620	.621	.621	.701	.702	.702
La Prairie	.706	.586	.603	.610	.613	.641	.658
Lac-Saint-Jean	.997	.758	.758	.758	.773	.773	.773
Lachine-Lac-Saint-Louis	.366	.498	.539	.556	.589	.660	.725
LaSalle-Émard	.550	.562	.594	.605	.624	.689	.729
Laurentides	.961	.630	.631	.632	.670	.674	.675
Laurier-Sainte-Marie	.812	.749	.757	.761	.774	.798	.815
Laval Centre	.852	.642	.646	.648	.664	.675	.683
Laval Est	.891	.578	.581	.582	.631	.639	.645
Laval Ouest	.689	.607	.619	.624	.607	.644	.662
Longueuil	.925	.710	.713	.714	.724	.734	.738
Lotbinière	.993	.542	.542	.542	.632	.632	.632
Louis-Hébert	.961	.578	.549	.580	.640	.643	.645
Mégantic-Compton-Stanstead	.856	.516	.520	.522	.562	.572	.578
Manicouagan	.788	.686	.694	.698	.789	.814	.831

Matapédia-Matane	.996	.575	.575	.575	.670	.671	.671
Mercier	.915	.638	.642	.644	.711	.721	.726
Mont-Royal	.226	.249	.291	.308	.449	.497	.520
Notre-Dame-de-Grâce	.254	.442	.529	.558	.604	.701	.812
Outremont	.552	.633	.667	.677	.665	.732	.783
Papineau-Saint-Michel	.652	.580	.596	.601	.619	.656	.678
Pierrefonds-Dollard	.349	.427	.480	.498	.552	.632	.677
Pontiac-Gatineau-Labelle	.755	.433	.442	.446	.599	.620	.631
Portneuf	.980	.546	.547	.547	.666	.667	.668
Québec	.965	.556	.557	.558	.644	.647	.649
Québec-Est	.986	.604	.604	.605	.670	.672	.672
Richelieu	.989	.672	.672	.672	.644	.646	.646
Richmond-Wolfe	.956	.545	.546	.547	.625	.628	.630
Rimouski-Témiscouata	.997	.601	.601	.601	.672	.672	.672
Roberval	.987	.607	.608	.608	.681	.682	.683
Rosemont	.868	.721	.724	.726	.733	.746	.755
Saint-Denis	.491	.678	.726	.745	.691	.776	.855
Saint-Henri-Westmount	.402	.429	.457	.470	.596	.667	.724
Saint-Hubert	.807	.692	.701	.705	.710	.731	.745
Saint-Hyacinthe-Bagot	.992	.578	.579	.579	.625	.626	.626
Saint-Jean	.958	.581	.583	.584	.645	.648	.650
Saint-Léonard	.544	.480	.496	.503	.558	.592	.613
Saint-Laurent-Cartierville	.436	.386	.412	.421	.478	.570	.549
Saint-Maurice	.992	.408	.408	.408	.653	.654	.654
Shefford	.965	.575	.577	.577	.624	.627	.629
Sherbrooke	.928	.405	.408	.408	.617	.624	.627
Témiscamingue	.952	.583	.584	.585	.673	.677	.679
Terrebonne	.972	.707	.709	.709	.747	.749	.751
Trois-Rivières	.988	.540	.540	.541	.634	.635	.636

TABLE 1 (CONTINUED)

Riding	Proportion French Home Language	For the BQ in 1993			Opposed to the Charlottetown Accord 1992		
		95% CI Lower Bound	Estimate	95% CI Upper Bound	95% CI Lower Bound	Estimate	95% CI Upper Bound
Vaudreuil	.642	.560	.593	.601	.621	.652	.676
Verchères	.976	.689	.689	.690	.702	.704	.705
Verdun-Saint-Paul	.685	.594	.613	.620	.664	.697	.718

TABLE 2

Proportion of Francophones Supporting the BQ in 1993 and 1997 and Supporting Sovereignty in 1995

Riding	Proportion French Home Language	For the BQ in 1993			For the BQ in 1997			For Sovereignty in 1995		
		95% CI Lower Bound	Estimate	95% CI Upper Bound	95% CI Lower Bound	Estimate	95% CI Upper Bound	95% CI Lower Bound	Estimate	95% CI Upper Bound
Abitibi	.814	.494	.534	.559	.392	.434	.455	.650	.656	.659
Ahuntsic	.689	.501	.571	.619	.354	.418	.455	.539	.550	.555
Anjou-Rivière-des-Prairies	.734	.500	.562	.596	.347	.407	.440	.542	.552	.556
Argenteuil-Papineau	.880	.497	.519	.531	.418	.447	.464	.565	.568	.570
Beauce	.995	.363	.364	.365	.266	.267	.268	.439	.439	.439
Beauharnois-Salaberry	.874	.530	.566	.582	.403	.436	.452	.417	.420	.421
Beauport-Montmorency-Orléans	.991	.581	.583	.584	.431	.434	.435	.566	.566	.566
Bellechasse-Etchemins	.997	.409	.410	.410	.333	.333	.334	.463	.463	.463
Berthier-Montcalm	.960	.638	.647	.652	.529	.542	.548	.655	.656	.657
Bourassa	.773	.459	.505	.532	.351	.396	.421	.519	.529	.532
Brome-Missisquoi	.784	.469	.512	.536	.289	.331	.352	.517	.523	.527
Brossard-La Prairie	.721	.512	.594	.632	.328	.419	.451	.544	.554	.558
Chambly	.940	.638	.660	.669	.493	.514	.524	.628	.630	.631
Champlain	.971	.492	.499	.502	.440	.449	.453	.611	.612	.612
Charlesbourg	.984	.603	.606	.608	.385	.389	.390	.552	.553	.553
Charlevoix	.972	.623	.633	.638	.545	.553	.557	.684	.685	.685
Châteauguay	.819	.613	.672	.704	.469	.522	.553	.666	.673	.676
Chicoutimi	.989	.641	.644	.645	.428	.431	.432	.687	.687	.687
Compton-Stanstead	.852	.486	.525	.542	.332	.367	.384	.538	.542	.544
Drummond	.986	.552	.556	.557	.423	.426	.428	.581	.581	.582
Frontenac-Mégantic	.986	.571	.574	.576	.371	.375	.376	.517	.517	.518
Bonaventure-Gaspé	.898	.420	.446	.456	.401	.442	.458	.618	.622	.624
Gatineau	.912	.356	.376	.384	.202	.221	.228	.305	.307	.308
Hochelaga-Maisonneuve	.868	.580	.621	.639	.462	.506	.524	.627	.630	.632

TABLE 2 (CONTINUED)

Riding	Proportion French Home Language	For the BQ in 1993			For the BQ in 1997			For Sovereignty in 1995		
		95% CI Lower Bound	Estimate	95% CI Upper Bound	95% CI Lower Bound	Estimate	95% CI Upper Bound	95% CI Lower Bound	Estimate	95% CI Upper Bound
Hull-Aylmer	.765	.306	.339	.354	.218	.250	.267	.322	.328	.331
Joliette	.991	.660	.662	.664	.466	.468	.469	.664	.664	.664
Jonquière	.990	.679	.682	.683	.486	.489	.490	.717	.717	.717
Kamouraska-Rivière-du-Loup	.998	.528	.529	.529	.383	.383	.384	.568	.568	.568
Notre-Dame-de-Grâce-Lachine	.379	.401	.528	.606	.247	.368	.422	.544	.583	.600
Lac-Saint-Jean	.996	.756	.758	.758	.635	.636	.636	.744	.744	.744
Lac-Saint-Louis	.257	.327	.409	.461	.343	.544	.827	.349	.389	.408
LaSalle-Émard	.564	.446	.549	.601	.294	.379	.431	.567	.588	.597
Laurentides	.960	.616	.627	.633	.458	.471	.477	.609	.610	.610
Laurier-Sainte-Marie	.843	.648	.730	.764	.533	.610	.647	.744	.749	.752
Laval Centre	.852	.582	.625	.647	.384	.445	.464	.592	.596	.598
Laval Est	.891	.540	.567	.582	.394	.419	.432	.556	.559	.561
Laval Ouest	.689	.516	.579	.621	.292	.401	.443	.559	.572	.577
Lévis	.991	.620	.622	.623	.452	.455	.456	.592	.592	.592
Longueuil	.929	.674	.696	.707	.512	.531	.540	.647	.649	.650
Lotbinière	.991	.553	.555	.556	.370	.373	.374	.531	.532	.532
Louis-Hébert	.961	.566	.575	.580	.401	.411	.415	.540	.541	.541
Manicouagan	.826	.577	.651	.682	.485	.539	.568	.756	.763	.765
Matapédia-Matane	.966	.491	.498	.501	.451	.460	.463	.611	.612	.613
Mercier	.916	.606	.634	.644	.507	.536	.551	.650	.653	.654
Mont-Royal	.223	.185	.269	.302	.087	.155	.182	.258	.284	.297
Outremont	.570	.475	.604	.683	.350	.432	.490	.623	.638	.647
Papineau-Saint-Denis	.540	.468	.587	.655	.346	.456	.526	.643	.664	.674
Pierrefonds-Dollard	.341	.452	.686	.896	.184	.269	.312	.396	.427	.442
Pontiac-Gatineau-Labelle	.770	.379	.422	.441	.337	.388	.414	.477	.487	.490
Portneuf	.979	.542	.547	.549	.436	.442	.444	.555	.555	.555

Québec	.967	.547	.554	.558	.445	.456	.460	.570	.571	.572
Québec-Est	.986	.498	.601	.603	.395	.398	.399	.542	.542	.542
Repentigny	.971	.700	.709	.714	.565	.575	.579	.687	.688	.688
Richelieu	.988	.661	.665	.667	.548	.552	.553	.609	.610	.610
Richmond-Arthabaska	.964	.525	.532	.536	.370	.378	.382	.573	.573	.574
Rimouski-Mitis	.995	.611	.612	.613	.470	.472	.472	.643	.643	.643
Roberval	.987	.604	.606	.607	.518	.521	.523	.672	.673	.673
Rosemont	.826	.602	.680	.713	.455	.539	.573	.673	.673	.681
Témiscamingue	.952	.567	.578	.584	.469	.483	.490	.587	.588	.589
Saint-Eustache-Saint-Thérèse	.904	.617	.641	.653	.478	.501	.512	.646	.649	.650
Saint-Bruno-Saint-Hubert	.846	.614	.656	.681	.464	.505	.530	.635	.640	.642
Saint-Hyacinthe-Bagot	.992	.573	.575	.576	.428	.430	.431	.556	.557	.557
Saint-Jean	.959	.571	.583	.589	.462	.475	.480	.578	.580	.580
Saint-Lambert	.769	.555	.620	.656	.383	.464	.503	.610	.617	.620
Saint-Laurent-Cartierville	.436	.239	.309	.338	.206	.258	.288	.353	.375	.386
Saint-Léonard-Saint-Michel	.539	.356	.417	.447	.197	.271	.303	.435	.452	.460
Saint-Maurice	.992	.413	.415	.415	.441	.442	.443	.568	.568	.568
Shefford	.963	.555	.563	.566	.358	.369	.372	.546	.547	.547
Sherbrooke	.928	.391	.404	.410	.302	.316	.323	.561	.563	.564
Terrebonne-Blainville	.943	.661	.678	.686	.504	.525	.533	.663	.664	.665
Trois-Rivières	.988	.532	.535	.536	.426	.430	.431	.571	.571	.571
Vaudreuil-Soulanges	.752	.522	.586	.621	.349	.413	.442	.560	.566	.570
Verchères	.976	.677	.685	.689	.540	.547	.550	.640	.641	.641
Verdun-Saint-Henri	.700	.491	.563	.600	.372	.434	.472	.596	.605	.610
Westmount-Ville Marie	.328	.278	.394	.441	.195	.296	.343	.440	.475	.493

Some of the largest confidence intervals appear in ridings with a mixed population. This is quite natural: we know the least about francophone voting in such places, since the presence of so many linguistic minorities conceals in the totals what francophones are doing. Nevertheless, EI has disclosed what information the bounds did provide for these ridings, and otherwise borrowed strength from the other ridings (and the trend in their bounds) to choose the most likely voting estimates. Figures produced this way are never as strong as one might like, but they are precise compared to what would be possible with a typical opinion poll.[28] Without a specialized (and costly) survey intended to maximize contextual variation, EI is the best option available.

Support for sovereignty varied considerably across Quebec ridings in all campaigns. Estimated support among francophones for the BQ ranged from 30 per cent in Mont Royal to 77 per cent in Laurier-Sainte Marie in 1993, and from 15 per cent in Mont Royal to 64 per cent in Lac Saint Jean in 1997. Francophones in the median riding gave 59 per cent of their votes to the BQ in 1993 and 44 per cent in 1997. The standard deviation around these estimates was 10 per cent in 1993 and 9 per cent in 1997. Francophone opposition to the Charlottetown Accord in 1992 ranged from 46 per cent in Gatineau-La Lièvre to 78 per cent in Jonquière. The median level of opposition to the Accord was 65 per cent with a standard deviation of 7 per cent. Estimates indicate that 74 per cent of francophones in Lac Saint Jean but only 24 per cent of francophones in Mont Royal voted for sovereignty in the referendum of 1995. Fifty-seven per cent of francophones in the median riding supported sovereignty in 1995, with a standard deviation of 11 per cent.

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28 Consider that, in a random sample of 1,500 Quebeckers, only 42 would be francophones residing in the six west-Montreal ridings where they are a linguistic minority. Whereas the EI 95 per cent confidence intervals in these ridings averaged less than +/- 8 per cent in 1993 and 1995, the equivalent margin of error for a proportion (p) computed from a survey of only 42 people is $2\sqrt{p(1-p)/42}$ or as much as +/- 16 percentage points for two standard errors; see Thomas H. Wonnacott and Ronald J. Wonnacott, *Introductory Statistics* (5th ed.; New York: John Wiley, 1990), 207. Controlling for other contextual variables would drive the hypothetical sample size to minimal levels. Any generalization about francophones in mixed ridings would thus be much less reliable with surveys, unless they consciously oversampled that group, and when considered this way EI's performance is impressive.

Context and Support for Sovereignty

The contextual variables theorized to influence support for sovereignty are primarily demographic, although we also capture whether candidates held office prior to the 1993 and 1997 elections. The demographic variables are aggregated characteristics of individuals in the riding, such as their income or education. These demographics are more than crude measures that parallel the individual characteristics utilized in survey data analysis. Rather, we hypothesize that voters are influenced by the context in which they live,[29] especially when sovereignty might carry indirect economic consequences for most residents of a locale. Government workers may vote against sovereignty if they believe that it will cost them their jobs, but reduced government employment would also carry serious implications for the entire economy in ridings with a high percentage of government workers. Self-interest might fuel widespread opposition among all voters in such a context. A similar logic applies to other demographic variables: highly educated francophones may influence those with less schooling when the former are numerous. Some of the influences of a youthful population may rub off on the older voters who reside near them.

For most of the contextual variables, we cannot separate the direct influence of individuals from the indirect influence of context. For example, if ridings with a younger population tend to support sovereignty, we cannot say to what extent that pattern stems from younger voters differing from older voters, rather than places with a youthful population differing from those with an older population. This does not pose a major barrier to the analysis, though, because it does not apply to our variable of prime theoretical interest: linguistic context. For that variable we used EI to estimate individual behaviour, so any remaining systematic relationship between a riding's linguistic mix and its vote should be purely a contextual phenomenon.

Proportion Where French is the Home Language

Francophones in mixed ridings might be the strongest supporters of sovereignty because they are more likely to compete with non-francophones for jobs or for control of their localities. They are presumably most likely to hear English idioms creeping into their children's speech, or to endure conversations spoken in English in public places.

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29 Robert Huckfeldt, "Political Participation and the Neighborhood Social Context," *American Journal of Political Science* 23 (1979), 579-92; and Christopher B. Kenny, "Political Participation and Effects from the Social Environment," *American Journal of Political Science* 36 (1992), 259-67.

Proximity fuelling separatist sentiment would accord with the "power threat" approach to inter-group relations.[30]

On the other hand, francophones in mixed ridings may have adjusted to the stresses of living between two worlds already, and may have economic or social ties to the Canadian majority. They might fear that their ridings will secede from Quebec if Quebec secedes from Canada, a possibility already raised by federalist politicians and supported in some opinion polls.[31] Those living in heavily francophone areas, meanwhile, may feel besieged without the mitigating effect of cross-cultural contact. They could have less to lose from severing provincial ties with Ottawa. They naturally might view sovereignty as less disruptive, and perceive less kinship with non-francophones, either in Quebec or in other Canadian provinces. Proximity lessening the sense of threat francophones might feel about cohabiting with the rest of Canada would correspond to the "contact hypothesis" popularized by Gordon Allport and applied to Canada by J. W. Berry.[32] It would validate the findings reported by Drouilly's study, which used a different methodology.[33] We therefore include an explanatory variable

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30 Giles and Evans, "The Power Approach to Intergroup Hostility." The threat hypothesis was once dominant in the study of US race relations, especially in the South, but it has been on the defensive even in the region from which it originated. See Michael Curt Corbello, "Searching for Evidence of 'Racial Threat' in Louisiana," *American Review of Politics* 19 (1998), 163-74; David Lublin and D. Stephen Voss, "Racial Redistricting and Realignment in Southern State Legislatures," *American Journal of Political Science* 44 (2000), 792-810; Jeffrey D. Sadow, "David Duke and Black Threat: Laying to Rest an Old Hypothesis, Revisited," *American Review of Politics* 17 (1996), 59-68; D. Stephen Voss, "Beyond Racial Threat: Failure of an Old Hypothesis in the New South," *Journal of Politics* 58 (1996), 1156-70; D. Stephen Voss and Penny Miller, "Following a False Trail: The Hunt for White Backlash in Kentucky's 1996 Desegregation Vote," *State Politics and Policy Quarterly* 1 (2001), 63-81; and Voss and Lublin, "Black Incumbents, White Districts."

31 Edward Greenspon, "Liberal unity agenda part of the election debris," *Globe and Mail* (Toronto), June 3, 1997; Lemco, *Turmoil in the Peaceable Kingdom*, 69-70; and " 'Plan B' for Quebec developed by Trudeau's cabinet," *Politics Canada*, June 16, 1997, http://politicscanada.com/archive/.

32 Gordon W. Allport, *The Nature of Prejudice* (Reading: Addison-Wesley, 1954). Some francophones have compared their status in Canada to that of blacks in the US; see Hudson Meadwell, "The Politics of Nationalism in Quebec," *World Politics* 45 (1993), 207 n8, 218; and Berry, "Cultural Relations in Plural Societies." See also, Pierre Vallières, *Nègres blancs d'Amérique* (Montreal: Editions Parti Pros, 1968). It may therefore seem strange to apply a hypothesis developed to describe majority attitudes. However, francophones are clearly a majority in Quebec, forming roughly 85 per cent of the population. The threat mechanisms described by these proximity theories would therefore still apply.

33 Drouilly's study compared ridings within the Montreal region and throughout Quebec separately (Drouilly, *Indépendance et démocratie*, 287-96). Support for the contact hypothesis is stronger in the Montreal region, although that may be a

to capture the linguistic mix: percentage of homes with French as a primary language.[34]

Income and Education

Harold D. Clarke and Allan Kornberg found no statistically significant relationship between education or income and support for the BQ in their analysis of voting behaviour in the 1993 election.[35] Nevertheless, support for sovereignty and the BQ may decline as median family income rises because affluent residents (as well as people who depend on consumption by the affluent for their livelihoods) may fear the cost of sovereignty to their incomes.[36] Since leading sovereignists have stated their intention to maintain, and perhaps even to expand, existing social welfare programmes and government employment, and Quebec pays less in taxes to Ottawa than it receives in federal transfers, wealthy Quebeckers could fear that a ''sovereignty tax'' would be levied to make up the difference. They also might fear a temporary reduction of economic growth during the first decade of sovereignty, especially if international bond rating agencies view Quebec as a risky debtor.[37] On the other hand, if ethnicity trumps economic concerns, there may be little relationship between the median family income of a riding and its support for sovereignty after controlling for other variables.[38]

Income and education are often highly related at the individual level, but less so at the aggregate level. The correlation between

statistical result of the city's greater linguistic diversity rather than a behavioural difference.

34 The inclusion of the proportion French home language variable necessitates excluding several other closely related variables that are effectively proxies for the ethnic composition of the riding. The correlation between proportion French home language and proportion English home language was -.94 in 1997. The correlations with proportion Catholic and proportion immigrant were .94 and -.89, respectively.

35 Harold D. Clarke and Allan Kornberg, ''Partisan Dealignment, Electoral Choice, and Party-System Change in Canada,'' *Party Politics* 2 (1996), 467.

36 Drouilly, *Indépendance et démocratie*, 297-98.

37 Fry, *Canada's Unity Crisis*, 28; Lemco, *Turmoil in the Peaceable Kingdom*, 68-69, 81-84, 93, 97, 114, 133-34. Although most scholars agree that Quebec is economically viable, they disagree over the economic implications of sovereignty. Lemco is essentially a pessimist. See Pierre Fournier for a more optimistic conclusion, though he also acknowledges business concerns (*A Meech Lake Post-Mortem: Is Quebec Sovereignty Inevitable* [Montreal: McGill-Queen's University Press, 1991], 104-19, 133-37).

38 Blais and Nadeau, ''To Be or Not to Be Sovereignist,'' 96-97; Fry, *Canada's Unity Crisis*, 39; Johnston et al., *The Challenge of Direct Democracy*, 198-200; Pierre Martin, ''Générations politiques: rationalité économique et appui à la souveraineté au Québec,'' this JOURNAL 27 (1994), 347-55; and Meadwell, ''The Politics of Nationalism in Quebec,'' 212-28.

median family income and the proportion of adults with university degrees was .41 for the 1993 ridings and .48 for the 1997 ridings. University students and professors have been in the vanguard of the sovereignty movement.[39] Particularly after controlling for income, ridings with relatively educated populations may exhibit greater support for sovereignty and the BQ. However, analyses of survey data suggest that educational attainment is unrelated to support for sovereignty after controlling for other factors. André Blais and Richard Nadeau found that socio-economic differences between federalists and sovereignists virtually disappeared after 1990.[40] Maurice Pinard argues that educational differences in voting greatly eroded during the 1995 referendum battle, particularly after the BQ leader, Lucien Bouchard, entered the campaign.[41]

Proportion Aged 65 or Older

Ridings with relatively large populations of voters aged 65 or older should demonstrate relatively high levels of support for federalist parties. Quebec's ''Quiet Revolution'' of the 1960s and the subsequent economic advancement of French Quebeckers, particularly the rise of a francophone business elite, increased confidence that Quebec could succeed as a sovereign nation. The decline of religious conservatism among francophones has meant that younger francophones tend to look to secular elites, including the Quebec government, rather than the Roman Catholic Church, to protect French language and culture.[42] Younger francophones grew up in an era during which sovereignty was widely discussed as a viable and legitimate option, and survey research has consistently documented that they support sovereignty and the BQ at a higher rate than their elders.[43] However, these results could reflect that young anglophones have been leaving Quebec;[44] it is not clear that the age pattern should appear within linguistic categories.

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39 Drouilly, *Indépendance et démocratie*; and Fry, *Canada's Unity Crisis*, 39.

40 Blais and Nadeau, ''To Be or Not to Be Sovereignist,'' 94-99; Johnston et al., *The Challenge of Direct Democracy*, 198-200; and Richard Nadeau, ''Le virage souverainiste des Québécois,'' *Recherches sociographiques* 23 (1992), 13, 24.

41 Pinard, ''Le contexte politique,'' 305-07.

42 Stéphane Dion, ''Explaining Quebec Nationalism,'' in R. Kent Weaver, ed., *The Collapse of Canada?* (Washington: The Brookings Institution, 1992); Fry, *Canada's Unity Crisis*, 39; and Meadwell, ''The Politics of Nationalism in Quebec,'' 207.

43 Blais and Nadeau, ''To Be or Not to Be Sovereignist,'' 93; Clarke and Kornberg, ''Partisan Dealignment, Electoral Choice,'' 467; Fry, *Canada's Unity Crisis*, 39; Martin, ''Générations politiques,'' 6; Nadeau, ''Le virage souverainiste des Québécois,'' 13; and Pinard, ''Le contexte politique,'' 301-05.

44 Lemco, *Turmoil in the Peaceable Kingdom*, 86-89, 99.

Proportion Employed in Government

Quebec contains two areas with a high proportion of government workers: Quebec City and Hull. Quebec may not have the financial resources to hire all former Canadian federal employees, especially since supporters typically argue that sovereignty would eliminate needless duplication of government services by Quebec and the federal government.[45] Regardless, sovereignty would undoubtedly be disruptive to economic activity in ridings with large numbers of government employees. Evidence on the relationship between attitudes and government employment has varied over time, but its success is consistent enough to warrant inclusion in our model.[46]

Proportion Employed in Agriculture

Farmers may fear that a sovereign Quebec will have to cut farm subsidies. Farmers also might lose protected access to Canadian markets, as well as benefits from federal regulation of the Canadian market.[47] Non-agricultural workers in ridings with significant agricultural employment undoubtedly would also suffer if farm incomes declined. Finally, agricultural regions may be more traditionalist than other ridings, and therefore less influenced by, or imbued with, the confidence generated in the business sector by the Quiet Revolution. Consequently, ridings with high proportions of agricultural workers may support the BQ and pro-sovereignty positions in referenda at relatively low rates.[48]

Incumbency

Studies of elections for the House of Commons in the United Kingdom and the House of Representatives in the United States have revealed that incumbents often fare better than other candidates at the polls.[49] Party identification is far more fluid in Canada than in those

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45   Ibid., 68-69, 97-100.
46   André Blais and Stéphane Dion, "Les employés du secteur public sont-ils différents?" *Revue française de science politique* 37 (1987), 279-317; André Blais and Richard Nadeau, "L'appui du Parti québécois: évolution de la clientèle de 1970 à 1981" and "La clientèle du 'oui,'" in Jean Crête, ed., *Comportement electoral au Québec* (Chicoutimi: Gaëtan Morin, 1984), 323-34; Edouard Cloutier, Jean H. Guay and Daniel Latouche, *Le virage l'évolution de l'opinion publique au Québec depuis 1960* (Montreal: Québec-Amérique, 1992); Fry, *Canada's Unity Crisis*, 35; and Meadwell, "The Politics of Nationalism in Quebec," 208-09.
47   Fry, *Canada's Unity Crisis*, 35.
48   Drouilly, *Indépendance et démocratie*, 294.
49   Bruce Cain, John Ferejohn and Morris Fiorina, *The Personal Vote: Constituency Service and Electoral Independence* (Cambridge: Harvard University Press,

two countries.[50] The federal party system does not extend into the provinces, and elites switch parties in Canada more often than their American or British counterparts. So it is possible that incumbency would carry great weight in Quebec. To measure the effect of incumbency on francophone voting behaviour, we use three dummy variables, coded one for incumbents and zero for non-incumbents—one each for the Bloc Québécois, Liberal or Progressive Conservative candidates. The coefficient on the BQ variable should be positive, indicating stronger pro-sovereignty candidates, while the Liberal and Conservative variables should return negative coefficients because they indicate stronger anti-sovereignty candidates.[51]

Results

Table 3 presents the results of regressing the estimated pro-sovereignty position in each of the four campaigns on the demographic and political contextual factors. The impact of the independent variables on support for the pro-sovereignty side, as measured by the direction of their coefficients, is largely consistent across elections. Confidence in the coefficients does vary from model to model.

As found by Drouilly, francophone support for sovereignty consistently rose with the proportion of francophones.[52] Raising the per-

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1987); James Campbell, *Cheap Seats: The Democratic Party's Advantage in U.S. House Elections* (Columbus: Ohio State University Press, 1996); J. Curtice and M. Steed, "The Voting Analyzed," in David E. Butler and Dennis Kavanagh, eds., *The British General Election of 1983* (London: Macmillian, 1983); Andrew Gelman and Gary King, "Estimating the Incumbency Advantage Without Bias," *American Journal of Political Science* 34 (1990), 1142-64; Philip Norton and David Wood, "Constituency Service By Members of Parliament: Does it Contribute to a Personal Vote?" *Parliamentary Affairs* 43 (1990), 196-208; and David Wood and Philip Norton, "Do Candidates Matter? Constituency-Specific Vote Changes for Incumbent MPs, 1983-1987," *Political Studies* 40 (1992): 227-38.

50 Harold D. Clarke and Allan Kornberg, "Risky Business: Partisan Volatility and Electoral Choice in Canada, 1988," *Electoral Studies* 11 (1992), 138-56; Harold D. Clarke and Allan Kornberg, "Support for the Canadian Federal Progressive Conservative Party Since 1988: The Impact of Economic Evaluations and Economic Issues," this JOURNAL 25 (1992), 29-54; Harold D. Clarke and Allan Kornberg, "Evaluations and Evolution: Public Attitudes toward Canada's Federal Political Parties, 1965-1991," this JOURNAL 26 (1993), 287-312.

51 Thanks to the party's loss of all but two seats nationally in 1993, Jean Charest, the Conservative leader, was the only Conservative incumbent in Quebec in 1997 so the analysis of the 1997 elections excludes the Conservative incumbency variable.

52 On the surface, the data appear to support Drouilly's conclusion that the relationship between proportion francophone and proportion of francophones voting "yes" is strongest in Montreal (Drouilly, *Indépendance et démocratie*, 287-90). Correlations from the 1995 referendum suggest a strong relationship in Montreal

Table 3

Contextual Factors and Proportion Francophone
Support for Quebec Nationalism

	For the BQ in 1993 Federal Election	For the BQ in 1997 Federal Election	For No in Charlotte-town Referendum	For Yes in Sovereignty Referendum
Intercept	.75[a]	.45[a]	.91[a]	.80[a]
	(.14)	(.16)	(.09)	(.12)
Proportion French home language	.18[b]	.23[a]	.15[a]	.38[a]
	(.08)	(.10)	(.05)	(.06)
Median family income ($1000)	-.003	-.002	-.005[a]	-.007[a]
	(.002)	(.002)	(.001)	(.002)
Proportion with university degrees	.33	.25	.46[a]	.53[a]
	(.23)	(.23)	(.16)	(.19)
Proportion aged 65 or older	-1.13[a]	-.69[b]	-1.20[a]	-1.33[a]
	(.43)	(.42)	(.29)	(.34)
Proportion employed in government	-.95[a]	-.78[a]	-.79[a]	-1.24[a]
	(.25)	(.25)	(.16)	(.19)
Proportion employed in agriculture	-1.42[a]	-1.22[a]	-1.17[a]	-1.88[a]
	(.40)	(.36)	(.26)	(.29)
BQ incumbent	.10[a]	.03		
	(.04)	(.02)		
Liberal incumbent	-.08[b]	-.03		
	(.04)	(.03)		
Conservative incumbent	-.02			
	(.02)			
R-Squared	.51	.44	.45	.65
Adjusted R-Squared	.44	.37	.41	.62
Standard Error of the Regression	.08	.07	.05	.06
Number of Cases	75	75	75	75

Note: Diagnostic tests conducted on the OLS results include the Jarque-Bara test, the White test, and the Ramsey-RESET test. The Jarque-Bara test indicates that the residuals are not normally distributed for the 1993 models. The White test suggests that heteroskedasticity is a problem for the 1997 models. These models were reestimated using a nonparametric bootstrap regression technique that resamples the OLS residuals 1000 times to produce more accurate estimates based on the empirical distribution of the data. Since the bootstrap results are virtually identical to the OLS results, the table presents only the OLS results.

[a] $p < .01$ for one-tailed tests.
[b] $p < .05$ for one-tailed tests.

centage of francophones by one standard deviation, 19 per cent, increased francophone support for the BQ by approximately 3 per cent in 1993 and 5 per cent in 1997. The impact of a similar change on opposition to the Charlottetown Accord was slightly less than 5 per cent. The ethnic composition of the population had the greatest impact on support for sovereignty in 1995, with a one standard deviation increase in the proportion of francophones causing the proportion of francophone "oui" voters to rise by nearly 10 per cent. Francophones who reside in a linguistically mixed community do not exhibit hostile backlash against their neighbours or greater perceived threat from anglophones; some combination of contact, assimilation and self-interest may even make them more supportive of retaining political ties to Canada. Furthermore, these findings indicate that the sovereignty movement cannot be viewed purely as the continuance of ethnic conflict through the federalism debate. Though firm conclusions require attitudinal data, support for sovereignty seems more likely to reflect the belief that a sovereign Quebec can manage and protect francophone interests better than a federal Canada can.

   The direction of the remaining demographic variables reflects the theories outlined in the previous section, although the results cannot distinguish between individual- and aggregate-level effects. Francophones in affluent ridings seem more risk averse, since they are less likely to support sovereignty. After controlling for income, those in ridings with a disproportionate share of university graduates support sovereignty at a higher rate. A change of one standard deviation in median family income, or $7000, corresponds to 4 per cent fewer ballots for sovereignty in the 1995 referendum and 3 per cent fewer for the Charlottetown Accord in 1992. Increasing income by a similar amount reduced support for the BQ by 2 per cent in 1993 and over 3 per cent in 1997. Raising the proportion of university graduates by one standard deviation, 7 per cent, reduced francophone support for Charlottetown in 1992 by nearly 3 per cent and increased francophone support for sovereignty in 1995 by the same amount. Similar increases in the share of university graduates resulted in 2-3 per cent more support for the BQ in both 1993 and 1997.

   As expected, francophones in ridings with relatively elderly populations support sovereignty at a lower rate. Reducing the percentage of elderly in the riding's population by one standard deviation, 3.5 per cent, causes a rise in francophone support for the pro-sovereignty

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(r = .77) and a weak relationship elsewhere (r = .17). After controlling for other variables, however, the relationship between proportion francophone and proportion francophone voting "oui" is strong even for non-Montreal ridings. When the regression is performed for just non-Montreal ridings, ß on Proportion French Home Language equals .36 (standard error of .10).

position of approximately 3-4 per cent in all four votes. Survey research suggests that generational replacement, rather than aging, explains this finding.[53] Generational replacement may aid the sovereignty movement in future federal elections and referenda.

Francophones in ridings with a high proportion of government workers voted against the sovereignist position at a greater rate than in other ridings. Those in ridings with relatively high numbers of agricultural employees demonstrated similar sensitivity to their economic base. The negative relationship was strongest for the 1995 referendum, likely because sovereignty posed a greater threat to the livelihoods of government employees and farmers than a vote for the BQ or against the Charlottetown Accord. By casting ballots against Charlottetown or for the BQ, francophone voters could stand up for Quebec, rebuke the federal government, and maintain sovereignty as an option for the future without actually risking the dissolution of Canada. Increasing the percentage of government workers by only 4.5 per cent, a standard deviation, resulted in a decline in francophone support for the BQ by 4 per cent in 1993 and 1997. Similar increases in the share of government employees reduced the francophone pro-sovereignty vote by 3 per cent in 1992 and 6 per cent in 1995. Raising the percentage employed in agriculture by a standard deviation of 3 per cent reduced the pro-sovereignty vote among francophones by 4 per cent in 1992 and 1993, and 5 per cent in 1995 and 1997.

It is worth noting that, while these results conflate both individual and contextual patterns, they provide fairly clear evidence that context influences francophone support for sovereignty. Coefficients greater than 1.0 or less than -1.0 should not appear if the correlations being studied are entirely individual-level effects. Increasing the percentage working in agriculture by one point should at most decrease the percentage voting in a particular way by one point as well, unless some of the non-agricultural workers also behave differently on average in that changed context. Coefficients exceed this range at least once on the age, government employment and agricultural employment variables. This is additional evidence that francophone voters are somehow being influenced by the demographic makeup of their local communities when formulating an opinion on sovereignty.

Incumbency appears to have strongly influenced the vote for the BQ in 1993, but not in 1997. BQ incumbents received 10 per cent more of the francophone vote in 1993 than other BQ candidates after controlling for other factors. BQ candidates running in ridings with Liberal incumbents received 8 per cent less of the francophone vote than other

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BQ candidates. Reflecting the meltdown of Conservative party fortunes, the presence of a Conservative incumbent did not influence francophone voting behaviour in 1993. Neither the presence of a BQ incumbent nor a Liberal incumbent influenced the share of the vote received by the BQ in 1997. The 1997 results are consistent with the party-centred nature of Canadian elections. The strength of the incumbency advantage in 1993 may reflect that there were only nine BQ and eleven Liberal incumbents. Representing bastions of support for their parties, these incumbents may have benefited disproportionately from the electoral swing against the Conservatives. BQ incumbents were founding members of their party and most likely attracted disproportionate media attention and public support through their by-election victories or when they dramatically abandoned federalist parties.

Conclusion

This article examined the effect of local context on francophone support for sovereignty in four Quebec campaigns: the 1992 vote on the Charlottetown Accord, the 1995 sovereignty referendum, and the 1993 and 1997 federal elections. We isolated francophone voting behaviour using King's solution to the ecological inference problem, and then ran multivariate OLS models predicting the estimated francophone vote one contest at a time.

Our main interest was to test competing theories of ethnic conflict. The power threat (or conflict) approach predicts that francophones in mixed-language ridings should feel most threatened. The contact hypothesis, by contrast, predicts that those in mixed ridings would have their fears assuaged by exposure to, assimilation with and interdependence with English speakers. The latter approach wins consistent support across all four elections, confirming Drouilly in a manner that should instill great confidence.

These results fit the conflict over Quebec's sovereignty into a much larger (and growing) literature on ethnic relations. Research almost consistently targets homogeneous ethnic communities as a catalyst for inter-group friction. In the United States, for example, the sources of cultural conflict between blacks and whites are enhanced in all-white neighbourhoods or counties.[54] The relationship between the ethnic composition of a riding and support for sovereignty in Quebec

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54 Donald P. Green, Dara Z. Strolovitch, and Janelle Wong, ''Defended Neighborhoods, Integration, and Racially Motivated Crime,'' *American Journal of Sociology* 104 (1998), 372-403; and Voss, ''Beyond Racial Threat,'' and ''Familiarity Doesn't Breed Contempt.''

also resembles patterns of support for the Plaid Cymru in Wales. Support for the Plaid correlates positively with the percentage of the population in a constituency that speaks Welsh.[55]

More generally, Quebec's francophones respond to context, as do voters in other nations. Uniquely Canadian institutions and history condition their response to that context, as do local demographics and the incentives that those conditions bring to bear in the sovereignty debate. Francophone voters appear quite sensitive to the potential economic impact of sovereignty. Ridings with large numbers of government employees apparently fear that sovereignty might eliminate jobs and undermine the economic base of their region. This finding explains the high level of opposition to sovereignty in the Ottawa/Hull region. Agricultural regions similarly appear to fear the economic impact of sovereignty. That the francophone vote reflects such sensitivity to local context, in predictable ways corresponding to hypothesized self-interest, gives a more optimistic picture of voter rationality than implied by opinion poll results.[56]

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55 Robert Waller and Byron Criddle, *The Almanac of British Politics* (6th ed.; London: Routledge, 1999).
56 Pinard, "Les déterminants psychosociaux," 345-53.