THE POSITIONING OF POLITICAL PARTIES IN THE QUEBEC 2007 ELECTION: DIFFERENT TECHNIQUES, SAME RESULTS?

Benoît Collette, Jérôme Couture, and François Pétry
Université Laval, Quebec City

Paper presented at the Annual Meeting of the Canadian Political Science Association,
University of British Columbia, Vancouver
4-6 June 2008

Abstract. This paper explores and compares various ways of locating the positions of political actors in a space. The political actors we examine are the Liberal Party (PLQ), the *Parti québécois* (PQ) and the *Action démocratique du Québec* (ADQ). Three methods that we explore extract policy positions from the parties' election platforms. One consists of hand-coding party platforms using the a priori scheme generated by the Comparative Manifesto Project (CMP). The second method consists of coding political texts electronically based on a dictionary. A third method uses the Wordscore computer program developed by Michael Laver and collaborators to generate estimates using words as data. These textual approaches are compared with the alternative method which consists of deriving the positions of the PLQ, the PQ and ADQ from expert and mass surveys administered around the time of the 2007 election. The study serves to cross-validate the policy estimates generated by the various approaches in a non-English-language environment.

1. How useful is the exercise of locating political parties in a common space?

The capacity to locate political parties in a common space allows researchers to compare “like with like”, a pre-requisite to further comparisons of parties and party systems cross-nationally, across federated states within one single federation (the Canadian provinces for example), and over time. Party location on a common space has become the instrument of choice in comparative typologies of parties and party systems (Blondel 1968; Sartori 1976) to the point that earlier criteria of comparison, such as whether two parties belong to the same ideological family, or the distinction between mass parties and cadre parties, are now considered largely irrelevant by comparative party scholars.

The capacity to locate parties in a common space also allows researchers to better understand and predict the dynamics and consequences of how parties compete with one another. For example, the knowledge of party location in a common space has been used to predict the extent to which differences between coalition members have any relevance to the policy outputs of the government to which they belong (Laver and Shepsle 1994). Because the parliamentary tradition rejects coalition governments in Québec (as it does in Canada in general) the kind of method used by Laver and Shepsle is not directly applicable here. However, the current Québec government is a minority government (as are the federal government and the government of Nova-Scotia) and it is not impossible that future Québec governments will be minority governments as well. The location of

political parties within a common space could very well be put to use in Québec in the future to predict not so much which party will join a coalition government but rather which opposition party will support a minority government on which vote.

The capacity to locate political parties in a common space allows us to better assess how representative governments really are. By locating political parties within a common space, and by comparing their position to the preferences expressed by voters, researchers can obtain a measure of congruence between the two, which can be used to test the relative merits of various voting models (Downs 1957; Budge and Farlie 1983; Rabinowitz and Macdonald 1989).

Last but not least, party location on a common space can also be used to compare what parties stand for with what governments actually do, thereby providing insight about whether governments are responsive to the demands of citizens (Budge and Hofferbert 1990; Klingemann, Budge and Hofferbert 1994).

The capacity to locate the positions of the ADQ, the PLQ, and the PQ in a common political space has the additional merit of providing a new window of interpretation and understanding of the Quebec party system. The Quebec party system has undergone a profound transformation in the past fifty years. The old party system dominated by the *Union nationale* (UN) since the 1930s disappeared in the 1970s under the combined pressure of Quiet Revolution and the new nationalism. This coincided with the emergence of a new party alignment between the right-of-centre federalist *Parti libéral du Québec* (PLQ) and the newly created left-of-centre anti-federalist *Parti*

québécois (PQ). The party realignment started with the election of 1970 in which the UN was thoroughly defeated by the PLQ and never recovered. The election of 1970 was the first of a series of three critical elections that culminated in 1976 with a PQ victory. The 1980s signalled the end of the critical period and the beginning of a new bi-partisan alignment between the PLQ and the PQ. The emergence of the *Action démocratique du Québec* (ADQ) in the 1994 election and the subsequent growth of its electorate has changed the PQ-PLQ bi-partisan alignment into what may become a stable three party system, although the volatility of the popular support for the ADQ makes it hard to predict what the future has in store.

The maturation of the partisan alignment between the PLQ and the PQ and the emergence of a third party raise the question of whether the spatial positions of the parties have remained stable relative to one another or whether they have shifted over time as part of the transformation of the party system, and, in the affirmative, what policy issues, and what parties have been affected most. Perhaps the changes in the Quebec party system have not affected the position of the PLQ and the PQ. But it is also possible that the maturation of the cleavages between the PLQ and the PQ and the emergence of a third party since 1994 have had perceptible impacts on the spatial location of political parties.

The paper is divided in two parts. Part one is a review of the strength and weaknesses of various approaches to measuring policy positions of parties: mass and expert surveys, hand-coded content analyses by the Comparative Manifesto Project (CMP), computer-assisted content analyses (CACA) based on dictionaries, and the Wordscore method.

There we discuss the measurement qualities (such as reliability, and cost) and the reliability of each approach. Part two focuses more particularly on the validity of each approach to estimating Quebec party positions on the Quebec autonomy vs. Canadian unity cleavage. In part two, we also discuss the validity of some approaches to estimating Quebec party positions on the left-right cleavage.

2. Four different ways to locate the positions of political parties

The oldest approach to locating political parties in a space involves the use of mass surveys. Following the seminal study by Inglehart and Klingemann (1976), this has been the most widely used method of charting both party and voter positions on a political space, especially the left-right axis.[1]

Another widely used method to locate political parties in a policy space is the expert survey. This approach was made popular thanks to a well publicized study by Castles and Mair (1984) who asked experts (that is political scientists) in 17 countries to locate political parties in their own country on an 11-point left-right scale. This was followed by a more ambitious study of left-right party location in 42 countries (Huber and Inglehart 1995). These two studies have inspired a large body of country-specific studies using expert surveys to locate political parties on

[1] For reviews of the data on party placement and on self placement on policy spaces using the mass or expert survey method see Knutsen, 1998; Laver and Garry, 2000.

a range of issues (for a sample, see Laver and Hunt 1992; Laver 1998).

Mass and expert surveys use a priori deduction to locate political parties on a pre-defined space. Surveys also estimate party location by asking people rather than relying on a closed set of texts. These two characteristics are sources of both strength and weakness in estimating the position of political parties in a space. Recent studies have shed light on several strengths of the survey method (Mair 1999; Budge 2000; Marks, Hooghe et al. 2007), including:

1. *Direct quantification*. Because survey respondents are asked to evaluate party positions on a 20-point scale, quantification of their judgment is unproblematic.
2. *Flexibility*. It is possible to gather information about any issue or topic, even if the information is not included in texts available for analysis.
3. *Validity*. Survey respondents base their judgment on different sources of information, not only the official party sources. That would include opinions voiced by factions within the parties and behaviour of leaders.

The following weaknesses have also been identified:

1. *Subjective judgment.* The basis of judgment is different for every respondent and it is impossible to measure on which basis respondents make their decision. Hence reliability across respondents is a problem.
2. *Informational asymmetry.* Survey respondents have different levels of information for different parties. It is assumed that they have a higher level of information for parties that are more visible and important than for little parties with no MPs. To limit informational

asymmetry, parties that don't have standing MPs, like the Green Party and *Québec solidaire*, are not included in the survey.

3. *Conflating preferences and behaviour.* Respondents rely on different things to make their evaluation: party manifesto, leader speeches, governmental action, television advertising, etc. Do they evaluate party rhetoric or action? In the case of a third party, like the ADQ prior to the 2007 election, this can be an issue because it has not yet made a government.

4. *Temporal constraints.* Expert and mass surveys cannot be used to go back in time and make judgments retroactively. Subsequent events and memory lapses are likely to influence the judgment of experts. This is by far the most important limitation on the use of surveys to locate political parties in a space.

Another method to locate political parties in a policy space is to analyze the texts that the parties themselves generate, usually in the form of election platforms. As in the case of mass and expert surveys, the textual approach has a well-documented history that need not be retold in detail here (see Volkens 2001). The origin of the approach can be precisely dated with the launching in 1979 of the ECPR cross-national Comparative Manifesto Research Project (CMP) under the leadership of Ian Budge and David Robertson. The project, which is still ongoing after almost thirty years in a much expanded form, has produced a huge amount of data,[2] and numerous publications in the form of edited volumes (Budge, Robertson and Hearl 1987; Laver and

[2] The Comparative Manifesto Project now involves 52 countries. The project received the 2003 data set award from the American Political Science Association in recognition of its unique contribution to the field.

Budge 1992; Klingemann, Budge and Hofferbert 1994; Laver 2001), a special edition of *Electoral Studies* (Spring 2007) and countless refereed articles, and chapters in edited volumes.

The initial objective of the CMP project was (and still is) to record and analyze the contents of the election platforms in democratic countries since World War 2. These data are then used to position the parties in their respective national political space and track their evolution from one election to another (Volkens 2002). The election platforms are coded into a pre-established set of policy categories. The coding unit is the paragraph, which means that each and every paragraph in a text is coded in one and only one category. If no category or if more than one category is applicable, the paragraph is coded with the residual category, 000. A final score is then calculated to reflect the relative percentage (emphasis) of each category in each party platform.

The CMP method postulates that political parties during election compete with one another by selectively emphasizing (priming) policy issues that are important to their constituencies, while trying to ignore issues that are not (Budge and Farlie 1983). Unlike Downs'(1957) model of party competition, which assumes that political parties directly confront each other on every issue, the selective emphasis model assumes that parties talk past each other focusing only on issues that are favourable to them while ignoring issues that could be electoral liabilities.

The CMP method measures the location of political parties in a multi-issue space by computing the relative salience of issues in their election platforms. A strongly positive correlation between two parties indicates that

they are close to one another on the multi-issue space. At the opposite, the strong negative correlation between two parties means that they are far apart from one another on the multi-issue space.

The strengths and weaknesses of the CMP method have been widely discussed. Here is a short list of some strengths based on Laver and Garry (2000), Benoit and Laver (2007), and Marks et al. (2007).

1. *Objective data.* Unlike data from expert and mass surveys, manifesto data are based on written and publicly available records. This makes possible competing and replicable measurement of party positions.

2. *Cumulative research.* Unlike data obtained from other methods, manifesto data are available as extended times series and as cross-sections. This makes direct comparison possible over time and across national settings.

3. *Separation of preferences and behaviour.* Manifestos express party preferences that are distinct of their behaviour. Therefore, they can be used to assess the causal link between party intentions and actions while in government.

4. *Salience.* Party manifestos provide direct evidence of declared salience of issues for political parties in electoral competition.

Here are some weaknesses associated with the CMP method that have been identified in the literature:

1. *Silent issues*. Manifestos are strategic documents designed to put a party in a positive light during the campaign. Issues that are an electoral liability are likely to be written off. Many manifestos tend to be relatively short and have limited policy coverage.

2. *Timing*. Manifestos are sometimes crafted before the campaign. Some issues that arise during the campaign may not be present in the manifestos, despite being crucial for the outcome of the elections.

3. *Dissent*. Political parties are presented as united and coherent entities in the manifestos. They do not provide information on intra-party dissent.

4. *Ambiguity*. There is ambiguity at two levels: in the interpretation of the manifesto and in the interpretation of coding categories. Coders have convergent or conflicting interpretations. Usually, the more experienced the coders are, the less disagreement there is in the interpretation. This can be a serious source of error and it is one of the most important criticisms than can be addressed to the CMP method. Past research showed inconsistencies in the results between two sets of coders.

5. *A posteriori interpretation*. Unlike mass or expert surveys and unlike the computerized methods that we examine later, which all boil down to estimating unknown party positions on known pre-established scales, the CMP method makes no a priori assumption about the dimensionality of the space on which it places policy actors. The CMP policy spaces are interpreted a posteriori by the researcher. Giving researchers more degrees of freedom to interpret their results may appear like an advantage at first glance, but it is really a methodological handicap because the CMP method provides no objective standards for deciding whether a particular spatial interpretation is more correct than another.

The CMP uses the traditional and highly labour-intensive technique of hand-coding texts. A more current

approach replaces the hand-coding of texts with computerized coding techniques (Laver and Garry 2000; Kleinnijenhuis and Pennings 2001). Most of these techniques reproduce the hand-coding of texts, using computer programs instead of people to do the coding based on dictionaries linking specific words to predefined policy positions. Three distinct dictionary techniques are discussed below.

The so-called “Positional Word Count” technique builds a dictionary based on the most frequently used words that are illustrative of the policy position of a given political party. A content analysis of party platforms in the 1992 British election by Laver and Garry (2000) is a good illustration. The analysis matches the words in pre-defined Conservative, neutral, and Labour dictionaries with those found in the Labour and the Conservative platforms, and gives each word a value of -1 if it is also found in the Conservative dictionary, 0 if it is found in the neutral dictionary, and +1 if it is found in the Labour dictionary. The same dictionary is then used to analyze the Labour and Conservative platforms in the 1997 British election.

Kleinnijenhuis and Pennings (2001) developed a method that makes computer-coding compatible with the CMP hand-coding technique. Instead of giving each word in a party platform a value of -1, 0 or +1 depending on whether it is found in a Conservative, neutral, or Labour dictionary, like Laver and Garry did in their study of British party platforms, Kleinnijenhuis and Pennings associate a list of words with each of 54 issue categories found in the initial CMP scheme. Their method consists of counting how frequently each word in the dictionary is found in the party platforms they analyze.

The natural sentence approach developed by Ray (2001) also uses CMP-compatible coding. However, unlike Kleinnijenhuis and Pennings's technique which uses the word as its unit of analysis, Ray's technique uses the sentence (or quasi-sentence) as its unit of analysis. Ray's dictionary also records the policy direction ("in favour off, opposed to, support") of a party platform statement, in addition to the issue.

Computerized coding schemes such as the ones just described are able to produce much more accurate and valid estimates of policy positions of the same texts when compared with the manual coding method used by the CMP. However, there are several limits associated with the type of dictionary used by these methods:

1. One needs to construct a new dictionary for every new scale on which to position political texts. As a result, no matter how heavily computerized it is, the method still requires heavy human effort in developing and testing coding dictionaries that fit particular times and political cultures.

2. As Laver, Benoit and Garry point out (2003: 312) "heavy human involvement in the generation of coding dictionaries imports some of the methodological disadvantages of traditional techniques based on potentially biased human codes."

3. Another limit is the small amount of data on which the typical dictionary is constructed, so that adding or subtracting one word from the dictionary may have a very large impact on the final result.

4. The method does not permit to precisely calculate the error associated with the measures generated by the

dictionary. The construct validity of the method is therefore undermined.

The last method to locate the positions of political parties is the Wodscore computer program recently developed by Michael Laver and his co-researchers (Laver, Benoit and Garry 2003). Unlike the CMP and the dictionary techniques which treat texts as discourse to be understood and interpreted for meaning either by a human coder or by a computer, the Wordscore technique treats texts (more precisely the words contained in those texts) as data containing information about the position of the texts' authors on predefined policy dimensions. Starting from a set of "reference" texts whose policy positions are determined a priori, the technique extracts data from these reference texts in the form of word frequencies and uses this information to estimate the policy positions of "virgin" texts about which nothing is known.

To paraphrase Laver, Benoit and Garry (2003: 313) what we know of a virgin text is limited to the words which it contains. The Wordscore program compares these words with the words contained in the reference texts which are taken to symbolize the extreme positions on a priori defined scale (say the left-right scale). A data processing program generates a first score (called a wordscore) for each word according to the relative frequency of its appearance in the reference text, then a second score for the relative frequency of all the wordscores in a virgin text (this second score is called a textscore). The final step consists of transforming the virgin textscores to their original metric. It is this calculation which makes it possible to locate the position of a political text on a space.

The main advantage of the Wordscore method is that it produces a distribution of scores around an estimated mean score. This makes it possible to come up with a standard error and therefore, to establish a confidence interval around the estimated mean score. The Wordscore method has the unique advantage among the methods reviewed here of providing a statistical measure of how different two virgin texts are from one another in their vocabulary. In fact, two texts are statistically different if their confidence intervals do not overlap. Of course, the scores are all the more valid if one has confidence in the choice of the references texts and in the measure used to decide what their positions are on a given scale or cleavage. Laver, Benoit and Garry (2003) make several important recommendations concerning the selection and scoring of references texts, one of them being that the virgin texts and the reference texts must share a similar frame of reference.

3. Estimating the positions of the PLQ, the PQ and the ADQ in recent elections

The rest of the paper is devoted to the tests of the four techniques described above, starting with mass and expert surveys, continuing with the CMP method, computer-generated dictionaries, and finally the Wordscore technique. The textual data that we put to the test are the platforms of the ADQ, the PLQ and the PQ in the elections of 1994, 1998, 2003, and 2007. The mass and expert surveys are used only to estimate party positions in the 2007 election. The tests consist of estimating party positions

on a Quebec autonomy vs. Canadian unity scale (cleavage). Party positions on a left-right scale are also estimated whenever the data are available.

Mass Survey

The survey data used in this study were gathered as part of a larger research of political attitudes in Quebec and Ontario.[3] The mass survey data were collected by Léger Marketing immediately after the 2007 Quebec provincial election. Identical survey questionnaires asked 88 questions, including basic demographics, issue importance, partisanship, attitudes toward parties and leaders, and policy preferences(stratified by region) of 1003 respondents between April 4 and 15.

The survey was administered to a probabilistic CATI telephone sample. The internet survey was administered to a random sample (stratified by region) of 1172 online panellists drawn from a pool of more than 150,000 volunteers who are part of an on-line panel that Léger built over several years from invitations on omnibus surveys sent to random phone samples, and recruitment using RDD techniques adapted for the internet. Because the panel was constructed from random samples, Léger believes that the panel is representative of the Quebec population.

The survey included two questions related to the topic of Quebec autonomy.[4] The first question asked which party was the best “to defend Quebec’s interest”, and the PQ was seen as best by 41.4% of respondents vs. 20.5% for the PLQ and 20% for the ADQ on this question. The second question

[3] We thank Jean Crête and the other members of the research team for making part of their data set available to us.
[4] The survey did not ask respondents to position the parties on a left-right scale.

asked which party was the best “to defend Quebec’s identity and culture”, and 50.3% of respondents again declared that the PQ was best for this question vs. 14.1% for the PLQ and 17.5% for the ADQ. The strong correlation between the responses to the two questions suggests that they can be averaged within a single index of perception of which party is best to defend Quebec’s autonomy. The PQ scores 46 points on the index, the ADQ 19 points and the PLQ 18. In other words, the PQ is perceived as best approximately two and half times a often as the ADQ and the PLQ, whose scores are almost undistinguishable.

Figure 1 about here

We realize that the mesure is not a mesure of party position in a space (the survey unfortunately did not ask respondents to position the parties) and that the questions on which it is based do not refer to Quebec autonomy exactly. It still gives a good approximation from which we can infer where mass opinion positions the parties relative to one another an a Quebec autonomy vs. Canadian unity cleavage.

Expert Survey

The expert survey approach was used once before to estimate the position of provincial political parties in Quebec, as part of a study by Abizadeh and Gray (1992)aimed at measuring the left-right position of the political party in power and of the premier of each Canadian province from 1960 to 1986. Experts (political scientists and professors from a few other departments at Canadian universities as well) were asked to rank each government, as either left,

centre, or right in terms of its party's own political spectrum. Their answers were then averaged for all respondents in each province for each year from 1960 to 1986. The study was designed to allow scores to vary only between 1 and 3 for NDP (or PQ) premiers, between 4 and 6 for Liberal premiers, and 7 and 9 for Conservative (or *Union nationale* or Social credit) premier. This severely limits the validity of the measure (and begs the question of why experts were asked to position provincial political parties and premiers in the first place). The results for Quebec premiers are reported in table 1.

Table 1 about here

In constructing our expert survey, we replicate the well-tested methodology that was already used by Laver and Hunt (1992), Laver (1998), Laver and Benoit (2005), and Benoit and Laver (2007). Our online expert survey questionnaire included 13 questions on a 1-20 scale. Respondents were first asked to position the ADQ, the PLQ and the PQ using the 20 point scale along five specific policy cleavages. They were then asked to estimate the importance of these cleavages for the political parties themselves. The remaining questions measured the self-reported level of interest of respondents in the 2007 election campaign. The exact wording of the questions is reported in the Appendix A.

The expert survey was conducted during the week preceding the Quebec general election, held on March 26 2007. The electronic questionnaire was sent to 172 political science professors in Quebec universities (plus

the University of Ottawa, and the University of Moncton). 40 experts (23%) sent back the questionnaire.

Table 2 highlights some results from our expert survey. The table presents the mean, the standard deviation, and the range of expert estimates of the positions of the ADQ, the PLQ, and the PQ on the two cleavages that interest us here. Looking first at the Quebec autonomy vs. Canadian unity cleavage, we see that the PQ is unsurprisingly the more nationalist party, with an average score of 2.6 points (and a standard error of 0.21). The PLQ stands on the opposite side of the cleavage, with 13.9 points (the standard error is 0.51). The ADQ gets 8.8 points on the scale with a standard error of 0.44. The standard deviation is lower for the PQ (1.34), than the ADQ (2.81), and the PLQ (3.26). Looking next at the left-right cleavage, we see that the parties are distinctly located, ranging from center-left (PQ), to right (ADQ), with the Liberals in between. The PQ has an average score of 8.5 (standard error = .32), the PLQ, 12.7 (.33), and the ADQ, 16.4 (.26). The standard deviation is low for all parties, ranging from 1.7 for the ADQ to 2.05 for the PLQ, and 2.08 for the PQ.

Table 2 about here

Unlike the descriptive statistics of table 2 which are not resistant to extreme values, the box-plots of Figures 2 and 3 display mesures of the same expert estimates that are resistant to outliers: the median (the vertical line inside each box) and the interquartile range. Farther out values (ouliers) are graphed as separate points. A quick comparison of table 2 with figures 2 and 3 shows little difference between the median and the mean estimates of

party positions, which suggests relatively symetric distributions.

Figures 2 and 3 about here

The expert survey also asked respondents to assess how important they thought the cleavages were for the parties, and to position the parties on the scale accordingly. The answers ranged from a low of 1 (not important at all) to a high of 20 (very important). The results (not shown) indicate that experts thought the Quebec autonomy vs. Canadian unity cleavage more important for the PQ (with a score of 16.8) and the PLQ (15) than for the ADQ (11.2). The left vs. right cleavage was considered to be less important for the Liberals (average score of 9.7) than for the PQ (12.1), and the ADQ (12.6).

CMP Coding

The initial objective of the CMP project was (and still is) to record and analyze the contents of the election platforms in democratic countries since World War 2. These data are then used to position the parties in their respective national political space and track their evolution from one election to another (Volkens 2002). The election platforms are coded into a pre-established set of 54 policy categories. Two additional categories have been added to account for Quebec specific policy issues: Quebec-Canada Relations and French language protection. The coding unit is the paragraph, which means that each and every paragraph in a text is coded in one and only one category. If no category or if more than one category is applicable, the paragraph is coded with the residual category, 000. A final score is then calculated to reflect the relative

percentage (emphasis) of each category in each party platform.

Each text is coded separately by two research assistants who, at the end, compare their respective coding and try to reach agreement when they disagree. When agreement cannot be reached, the assistants ask a referee to settle the issue. Successive waves of coding and arbitration are undertaken until perfect agreement is reached. The inter-coder agreement, the percentage of agreement between the coders when they first compare their results, is a measure of uniformity of comprehension and the only measure of uncertainty available. Disagreement can have many causes: cognitive differences between coders, ambiguity in the meaning of the manifesto or the categories, and random errors of coding. A low level of agreement threatens the validity of the coding process. For the 2007 Quebec manifestos, the inter-coder agreement is comparable to other studies, while the percentage of un-coded units is low (see table 3).

Table 3 about here

The CMP method postulates that political parties during election compete with one another by selectively emphasizing (priming) policy issues that are important to their constituencies, while trying to ignore issues that are not (Budge and Farlie 1983). Unlike Downs' (1957) model of party competition, which assumes that political parties directly confront each other on every issue, the selective emphasis model assumes that parties talk past each other focusing only on issues that are favourable to them while ignoring issues that could be electoral liabilities.

The CMP method measures the location of political parties in a multi-issue space by computing the relative salience of issues in their election platforms. A strongly positive correlation between two parties indicates that they are close to one another on the multi-issue space. At the opposite, the strong negative correlation between two parties means that they are far apart from one another on the multi-issue space.

CMP Quebec-Canada Relations Scale

In Quebec, regional nationalism and protection of the French language are two important issues. Because these two issues are not found in the original 54 categories of the initial CMP coding scheme, we added them to the CMP Quebec coding scheme as two separate categories called Quebec-Canada relations, and French language promotion. A Quebec autonomy vs. Canadian unity scale was then constructed by adding the frequencies of mention of the two categories in the election platforms under analysis. Therefore, the scores on the scale vary between a theoretical maximum value of 100 and a theoretical minimum value of zero.[5] Figure 4 reports the positions of the ADQ, PLQ and PQ on the scale thus constructed, based on their election platforms in 1994, 1998, 2003, and 2007.

Figure 4 about here

[5] According to our data (not shown) the French language promotion category has been mentioned 0.8% of the time on average in the platforms of the ADQ the PLQ and the PQ over the last four elections, against 3% over the elections that took place between 1976 and 1989. So it appears that the salience of the French language protection issue has decreased recently at least in the election platforms of the ADQ, the PLQ, and the PQ, and that the issue is not as important overall in these election platforms a its salience in the general political agenda and in the collective psyche of French Quebecers would lead us to believe.

From figure 4 we can see that, as expected, the PQ put much more emphasis on the Quebec-Canada relations issue than the other parties, although the gap seems to have narrowed in 2007 on this issue. However, in the absence of any confidence interval statistics, it is impossible to know if the 2007 data are the result of measurement error or of a real movement over time in the salience of the Quebec-Canada relations issue in the party platforms.

CMP Left-Right Scale

To measure the distance between the parties on the left-right cleavage, Budge et al. (2001) created a scale that uses 26 original CMP categories. Many of these 26 categories are rarely (if ever) used in Quebec party platforms. As a result, 16 of the 26 categories had to be dropped from our analysis of the position of Quebec parties on a left-right scale. The remaining “left” categories to analyze are Market regulation (403), Protectionism Positive (406), Welfare State Expansion (504), Education Expansion (506), and Labour groups: positive (701). The “right” categories retained for analysis are: Free enterprises (401), Incentives (402), Protectionism Negative (407), Economic Orthodoxy (414), and Law and order (605). The final left-right score is built by subtracting the sum of the frequencies for the categories on the “left” from the sum of the frequencies for the categories on the “right”. A negative score is associated with the left, and a positive score with the right. Figure 5 reports the positions of the ADQ, PLQ and PQ on the left-right scale thus constructed, based on their electoral platforms in 1994, 1998, 2003, and 2007.

Figure 5 about here

According to figure 5, Quebec parties tend to be located on the left side of the left-right scale, with only the 1994 ADQ platform located near the middle of the scale. The ADQ, the PLQ and the PQ have all moved leftward along the scale over time, from -12.3 points on average in 1994 to -23.6 on average in 2007. The leftward move is most pronounced with the ADQ. The distance between the parties has also diminished over time, from 25 points in 2003 to 10 points in 2007, and this is due mainly to the ADQ coming closer to the two other parties. The ADQ is the party with the least leftist score, -10.7 on average over four elections, compared to -23.5 for the PLQ, and -22.2 for the PQ. The PLQ has a higher variation, with a 9 points average, while the ADQ has an average of 7.1, and the PQ, 2.7.

The PQ didn’t change position much on the left-right axis over time. This is due in part to the fact that the PQ manifestos put more emphasis more consistently on welfare state expansion and education expansion (two leftist categories) than the manifestos of the two other parties. There is also evidence that the position of the PQ is more stable than the positions of the ADQ and of the PLQ in other dimensions aside of left-right (Pétry and Landry 2001; Pétry 2006). We speculate that this is a reflection of the more programmatic nature of the PQ. Unlike the ADQ and the PLQ, the PQ has a programme, which is periodically reviewed by party activists independently of the electoral calendar, and from which its electoral platforms are drawn.

The PLQ does not put forward distinct policy programs like the PQ does. The election platforms of the PLQ are

therefore produced “from scratch” at each election so to speak. They are therefore more likely than the platforms of the PQ to reflect the priorities of the moments, and this would explain why they tend to move around a bit more. The abrupt move for the PLQ platform between 2003 and 2007 is explained by the outlier nature of the 2003 platform. It was a shorter than usual platform that focused on a small number of issues, mostly health care expansion (15%), education expansion (17%), and government efficiency (19%). The 2007 platform is a return to more normal scores of 9% for health care expansion, 14% for education expansion, and 6% for government efficiency. The 2007 PLQ platform gives more space to issues that it did not emphasize in 2003. The Quebec-Canada relations issue in particular represents 10.4% of the total in 2007 as compared to 0.6% of the total in 2003. These changes in relative issue salience explain in large part the big jump in the PLQ position on the left-right axis between 2003 and 2007.

The 2007 ADQ platform stands closer to the PLQ and the PQ platforms than at previous elections. This can be explained in part by a decrease in the frequency of mentions of the government efficiency issue (303), from 14% to 6.4% and of the free enterprise issue (401), from 11% to 6.4%. Government efficiency and free enterprise are classified as right wing issue categories.

Do Quebec parties really stand more to the left than their counterparts in most countries that have been studied by CMP researchers? Again, these results seem to be more a matter of measurement than anything else. The inclusion of Welfare state expansion (504) and Education expansion (506), two of the most frequent categories in the “left” side introduces a strong measurement bias. Because these

categories correspond to the two most important budget expenditures of the Quebec government, it is not surprising to find out that they are the most salient issues in electoral manifestos. Since 1994, the welfare state expansion category averaged 8% of the total, and the Education expansion, 10%. Then no surprise to see Quebec parties with negative scores. The 1994 ADQ manifesto, the first one, is the only manifesto close to the middle because there was no mention of health care and education.

The CMP coding frame is intended for national state party manifestos, not for sub-national state. The Quebec manifestos do not cover as many issues as a full-fledged national state would, especially in the Canadian context, with a sharp separation of legislative jurisdiction between the federal government and the provinces. Many issues, such as national defence, and macroeconomic controls, are not typically mentioned in provincial election platforms, hence reducing the range of usable categories.

Again, we must use caution in our interpretation of the CMP left-right scale as it is applied to the Quebec case, for two methodological reasons. First, in the absence of any indication of the degree of statistical uncertainty associated with CMP estimates, it is impossible to tell whether the difference between them is due to measurement error or to real movement in some underlying variable.

Second, the left-right interpretation of CMP data is only an a posteriori interpretation, and, as for any a posteriori interpretation, there is no independent objective way to ascertain whether it is correct or not. We cannot be certain of making the correct a posteriori interpretation of the CMP Quebec autonomy vs. Canadian unity scale either. But it is reasonable to think that the

Quebec autonomy vs. Canadian unity cleavage has more chances of being correct than of being incorrect because, this is a well known and durable cleavage in Quebec society. It is not obvious that the same can be said about our a posteriori interpretation of the left-right scale in Quebec. First, the left-right dimension is not as salient, and it does not appear to have the same meaning in Canada (and Quebec) as in Europe (Gibbins and Nevitte 1985). Second, many left-right categories in the CMP coding scheme are either not applicable to Quebec or obsolete, while new issues possibly relevant to a left-right scale don't have corresponding categories in the initial CMP scheme. For these reasons, the CMP left-right scale probably has more chances of being correct in the case of a European party system in the early 1980s, at the time the CMP coding scheme was developed, than when being applied to the Quebec party system of 2007.

Positional Word Count

Next we estimate the position of the ADQ, the PLQ and the PQ on the Quebec autonomy vs. Canadian unity axis in the four most recent Quebec elections using our own version of Laver and Garry's "Positional Word Count". For this purpose, a dictionary was constructed based on the most frequently used words in the manifesto for a "Yes" vote, and in the Manifesto for a "No" vote in the 1995 Quebec sovereignty referendum. Words that were used significantly more frequently (based on a Chi-square test) in the Manifesto for a "Yes" vote were classified as pro-Quebec autonomy words, and given a value of -1; words that were used significantly more often in the Manifesto for a "No" vote were classified as pro-Canadian unity words, and given

a value of +1; words that were not mentioned significantly more often in one or the other manifesto were deemed neutral words and given a value of zero.

The technique was able to produce a ten-word dictionary which was used to estimate the positions of the ADQ, the PLQ, and the PQ on the Quebec autonomy vs. Canada unity cleavage in the 1994, 1998, 2003 and 2007 elections.[6]

Figure 6 about here

Figure 6 presents the results. The measures on the vertical axis have been rescaled from a value of zero representing the Quebec autonomy end of the cleavage, to a value of twenty representing the Canadian unity end of the cleavage. This will make it easier to compare eventually the results of the Positional Word Count dictionary method with the Worscore results that use a scale ranging from zero to 20. A score of 20 in figure 6 means that a party platform only mentions words that are classified as pro-Canadian unity in the dictionary. At the opposite, a party platform that mentions only pro-Quebec autonomy words is given a score of zero. A score of 10 on the scale means that a party platform mentions pro Canadian unity and pro Quebec autonomy words in equal proportions.

The results show that the PQ has mentioned pro Quebec autonomy words more often than the ADQ and the PLQ at every election since 1994. However, there is more variance over

[6] The Chi-square test for statistical difference necessitates that a word must be mentioned at least five times in a given text in order to be included in the dictionary. This constitutes a limit on the technique, in view of the fact that only a very small proportion of words are mentioned five times or more. As we will see, the Wordscore technique makes it possible to compare party positions based on dictionaries that include several thousands words by comparison.

time in the platforms of the PQ than in the platforms of the ADQ and the PLQ. In particular, the PQ platform in the 1998 election, the platform on which Lucien Bouchard was re-elected, mentioned pro-Canadian unity words more often than it mentioned pro-Quebec autonomy words. The PQ took a more pronounced anti-federalist position in recent elections, to the point that its 2007 platform was its most radical pro-Quebec autonomy platform since 1994. The positions of the ADQ and the PLQ on the Quebec autonomy vs. Canadian unity have been more stable over time (with standard deviations approximately equal to one) than the position of the PQ (with a standard deviation larger than three).

The Positional Word Count method also allows counting the number of words relevant to a given cleavage that are mentioned by each party at each election (a measure of emphasis of that cleavage). Not surprisingly, the words included in the dictionary for the Quebec autonomy vs. Canadian unity cleavage have been mentioned much more often in the platforms of the PQ than in the platforms of the ADQ and the PLQ, at least in the elections of 1994, 1998 and 2003. The dictionary words relevant to the Quebec autonomy vs. Canadian unity cleavage were more equally shared between the parties in the 2007 election, with 49 occurrences for the ADQ, 99 for the PLQ, and 70 for the PQ.

As we will see, the results of the Positional Word Score method are congruent with other computer based coding methods. In fact the correlation with the Wordscore results is a statistically significant .65. One advantage of the Positional Word Count method compared with the Wordscore method is that is allows taking into account the substance of policy issues. However, there are several limits

associated with the type of dictionary used by the Positional Word Count method. One is the fact that one needs to construct a new dictionary for every new scale on which to position political texts. Another limit is the small amount of data on which the dictionary is constructed: adding or subtracting one word from the dictionary may have a very large impact on the results. Another shortcoming is that it is impossible to precisely calculate the error associated with the measure generated by the dictionary. The construct validity of the method is therefore undermined. Is there a way to construct a dictionary that would allow us to assess measurement error more precisely? The "CMP Compatible Coding" method that is presented next seems to posses the attributes that respond to this last criterion.

CMP Compatible Coding

Next we reproduce the method developed by Kleinnijenhuis & Pennings (1999) to render computer-coding compatible with the CMP hand-coding technique. Our dictionary is derived from one that was developed earlier to conduct a computer-assisted content analysis of the throne speeches pronounced by Quebec Premiers from 1960 to 2007 (Crête and Diallo 2007).[7] The coding of the Quebec throne speeches used 24 of the 54 original CMP categories. Our dictionary only includes the words that are associated with two original CMP categories: these are categories 203 (positive Vision of the Constitution) and 204 (negative Vision of the Constitution).

[7] The computerized dictionary was constructed with the help of the QDA Miner software. We thank Jean Crête for making the dictionary data available to us.

We could have constructed our dictionary from our own CMP coded Quebec election platform data. However we wanted to avoid the kind of circularity associated with coding textual data on the basis of a dictionary that was built from the same data. This is why we relied on throne speech data that are independent of election platform data to construct out CMP compatible dictionary.

To create our dictionary, we begin by lemmatising (or stemming)[8] the words in the texts under analysis. We then subtract all the words with meanings that are not relevant in the context (e.g. “independent” in “independent variable” as opposed to “independent” in “independent nation”), and those which have less than five occurrences in a single text as had been done previously with the Positional Word Count method. We then correlate each coding category with a pre-determined list the words by calculating Chi-square statistics of association between words and coding categories.

The computer coding method is in agreement with the hand-coding method in 57% of the case. In other words, the dictionary predicts differently from human coders 43 times out of 100. The 57% figure is conceptually similar to the initial inter-coder agreement in the hand-coding CMP method. The percentage can be improved upon by further rounds of reconciliation between one or more coder and a computer. The application of the Kleinnijenhuis & Pennings technique to the 2007 Quebec election platform texts produces a dictionary of ten words that defines the Quebec autonomy vs. Canadian unity scale. Interestingly, only two

[8] By this is meant the regrouping of various forms of a word with a same root to count them as the same word.

words in the CMP compatible dictionary are identical to those in the Positional Word Count dictionary.

The positions of the ADQ, the PLQ and the PQ obtained from the CMP Compatible method are displayed in figure 7. The Positional Word Count method placed the platforms of the PQ far away from those of the PLQ and the ADQ (the latter being sometimes undistinguishable from each other). By contrast, the CMP Compatible method places the platforms of the ADQ, the PLQ and the PQ in positions that are more equidistant from each other. The platforms of the three parties present a similar variance over time: The standard deviation is 4 for the ADQ, 3.4 for the PLQ, and of 3.6 for the PQ. But there is some leapfrogging between the ADQ and the PQ midway through the period of analysis.

When we compare the positions of party platforms on the Positional Word Count (figure 6) and the CMP Compatible (figure 7) scales, we see that the orderings are congruent across both scales for the 2003 and 2007 elections, with the PQ at the Quebec autonomy end, and the PLQ at the Canadian unity end of the scale, and the ADQ in between. But the orderings differ from one method to the other in 1998 and especially in 1994. The Positional Word Count method places the ADQ at the Canadian unity end of the scale in 1994 whereas the CMP compatible method places the ADQ at the Quebec autonomy end of the scale in 1994.

Wordscore

The Wordscore program predicts the position of political texts on a pre-determined scale by comparing the words contained in those texts with the words contained in previously selected texts which are taken to represent extreme positions on the pre-determined scale.

Here is a summary of how we used the Wordscore program to measure the positions of the ADQ, PLQ and the PQ on the Quebec autonomy vs. Canadian unity scale.

We first select the reference texts which will be used to represent the extreme positions on the a priori defined Quebec autonomy vs. Canadian unity scale. As Laver, Benoit and Garry (2003) point out, it is important that the reference texts are directly relevant to the virgin texts under analysis. We selected the Manifesto for a “Yes” vote at the 1995 referendum on Quebec sovereignty as our reference text for the Quebec autonomy end of the scale, and the Manifesto for a “No” vote in the same referendum as the reference text for the Canadian unity end of the scale. These texts were platforms written in the context of a political campaign, and they use a language that is comparable to that used in the electoral platforms of the ADQ, the PLQ and the PQ (the virgin texts).[9]

The Manifesto for a “Yes” vote is arbitrarily coded 0, and the manifesto for a “No” vote is arbitrary coded 20. Each virgin text (that is each party platform at each election) is then coded by the Wordscore program which gives to each word in each virgin text a score between 0 and 20 according to the relative frequency of its appearance in the reference texts. For example, if the word “nation” appears one percent of the time in the reference text that symbolizes the “Yes” side, and 0.9 percent of the time in the reference text that symbolizes the “No” side,

[9] The only weak points are that the reference texts were written for a referendum while the virgin texts were written for general elections and that they were written for a consultation that took place in 1995, two years after the first virgin document was written (1993).

that word obtains a score equal to (0.01*20) + (0.09*0) = 0.2.

By dividing the sum of the scores associated with each word by the total number of words in a text, we obtain an average which corresponds to the total score of the text. Wordscore also gives the standard error of each score, which can be used to determine when the positions of two texts are statistically different, that is when the confidence intervals of their scores do not overlap. The capacity to generate confidence intervals around the scores it generates is the one major advantage of the Wordscore technique compared to all other techniques of positioning political parties in a space.

From the wordscores in each reference text, we computed the textscores in each virgin text, and then transformed the virgin textscores to their original metric to be able to locate the positions of each platform at each election in our pre-defined space.

Figure 8 about here

Figure 8 present the party platform positions on the Quebec autonomy-Canadian unity cleavage as they are estimated by the Wordscore method. The positions of the three parties are statistically distinct from one another at each election. However, the figure shows that the platforms of the PQ have followed a trajectory that is quite distinct from the paths that the two other parties have followed. The positions of the PQ have remained stable and close to the Quebec autonomy end of the scale at each successive election (standard dev. = 2.6) although they have gradually shifted toward the middle of the scale. By

contrast, there has been considerably more variation in the positions of the ADQ (standard dev. = 9.6) and the PLQ (standard dev. = 7) over time. Thus, although their positions on the scale are statistically distinct from each other at each election, the distance that separates the platforms of the ADQ and the PLQ is less than the distance that separates them from the platform of the PQ. There is even one instance of leapfrogging between the ADQ and the PLQ between 2003 and 2007.

Table 4 about here

Table 4 shows the highlights of Wordscore estimates of party positions on the Quebec sovereignty, and the left-right cleavage. The two cleavages have been measured with separate reference texts. The *Manifeste pour un Québec solidaire* (2005: left) and the *Manifeste pour un Québec lucide* (2005: right) were the reference texts for the left-right axis; the Manifestos for the “Yes” (Québec 1995) and for the “No” (Québec 1995) in the last referendum were the reference texts for the Quebec autonomy vs. Canadian unity axis. We used the party platforms in the previous election as reference texts to measure the variation in party positions between elections, on both axes. The platforms of the PLQ were coded 10 (on a 0-20 scale) for the left-right scale, while the platforms of the ADQ were coded 10 for the Quebec autonomy vs. Canadian unity scale.

This method enables us to conduct 15 separate Wordscore analyses: three for the 1994 election, and four for each subsequent election. The results are reported in tables B1 through B4 in appendix B. Here we only discuss the details needed to understand the results of table B4 which reports

the Wordscore results for the 1994 election. The table presents the Wordscore estimates of party positions based on the left-right scale, on the Quebec autonomy vs. Canadian unity scale, and on a “past party platform” scale in which words from the 1989 PQ platform are given a value of zero, and words in the PLQ platform of 1989 are given a value of 20. (The ADQ did not present a platform in the 1989 election, so its platform cannot be entered in the Wordscore calculation of party positions in 1994).

The data of table B4 indicate that for 1994, all three party platforms are statistically distinct, i.e., there is no statistical overlap (at 95%) in party positions on the left-right scale. Only the platform of the PQ is statistically distinct on the Quebec autonomy vs. Canadian unity scale, and none is statistically distinct on the scale constructed from past PLQ and PQ platforms. Interestingly, and counter-intuitively, the Wordscore program estimates that the ADQ platform is located in the middle of the left-right scale in 1994.

Looking at the other table in appendix B, we see that there are four other cases where the platforms of all three parties are statistically distinct, two in 1998, and two in 2003, and five additional cases in which the position of one party is statistically distinct from the positions of the two other parties. Party positions cannot be statistically differentiated from one another in the four remaining cases

Table 4 in the text summarizes the data from appendix B on the basis of whether or not Wordscore estimates of party positions satisfy the criteria of plausibility, and distinctiveness. The plausibility criterion is met if the ordering of party platforms on each scale is the same as

the ordering in the expert survey. According to the expert survey, the PQ is located at the autonomist end of the Quebec autonomy vs. Canadian unity scale the ADQ is located in the middle position, and the PLQ is located at the federalist end of the scale. And on the left-right scale, experts place the PQ at the left, the PLQ at the centre, and the ADQ at the right. The Wordscore data meet the distinctiveness criterion if party positions are statistically distinct.

As table 4 shows the party platforms are found to be statistically distinct from one another four out of seven times on the left-right cleavage. The proportion of statistically distinct platforms is even higher on the Quebec autonomy vs. Canadian unity cleavage (six out of seven). This suggests that although the presence of a left-right cleavage cannot be dismissed in Quebec partisan politics, the Quebec autonomy vs. Canadian unity cleavage remains the dominant cleavage. The data of table 4 also show that Wordscore estimates of how parties are ordered along the scales are not very plausible, at least when we take the ordering of party positions by Quebec political scientists as our standard of what is plausible. The level of plausibility is low on the Quebec autonomy vs. Canadian unity cleavage (three out of seven) and even lower on the left-right cleavage (two out of seven).

The choice of reference text has an impact on the plausibility of the Wordscore estimates. On the left-right axis, 2 out of 7 Worscore estimates are consistent with expert survey data when the reference texts used to calculate them are the previous election platforms. But the score falls to zero when the reference texts used to calculate the Wordscore estimates are the *Québec lucide* and

the *Québec solidaire* Manifestos. A similar thing happens in the Quebec autonomy vs. Canadian unity scale. 2 out of 7 Worscore estimates are consistent with expert survey data when the reference texts used to calculate them are the previous election platforms. But the score falls to zero when the reference texts used to calculate the Wordscore estimates are the Manifestos for the “Yes” and for the “No” at the 1995 Referendum.

To conclude this section of the paper, Wordscore results are more distinct than plausible, and the choice of reference texts has a powerful impact on the performance of the Wordscore program. The choice of previous election platforms as reference texts gives better results than the choice of other texts.

4. Conclusion

Existing comparisons of approaches to measuring policy positions of political parties have mostly dealt with left-right positions in Europe. In this paper, we have compared these approaches in a non European sub-national context, and with respect to an entirely new issue: the Quebec autonomy vs. Canadian unity cleavage. Such a comparison has never so far been undertaken. Our analysis has focused more particularly on the *validity* of these approaches to estimating the positions of the ADQ, the PLQ, and the PQ on this issue, that is, whether and to what extent each approach measures the “true” position of each party, the most plausible and consistent one based on prior knowledge of the Quebec party system.

Table 5 provides the answer. The table presents the approaches so that they can be compared according to

whether the results are entirely plausible, partially plausible, or not plausible at all, and entirely consistent, partially consistent, or not consistent at all over time. A result is plausible if it orders the party in the same order as experts do, and it is consistent if variation in party positioning goes in the same direction as the other methods indicate.

Table 5 about here

Plausibility is high for the Quebec autonomy vs. Canadian unity cleavage with every method, except the mass survey method, where there is no difference between the positions of the ADQ and the PLQ. On the left-right cleavage, Wordscore outputs are partially plausible, because the positions of the PQ and the PLQ are not always statistically different.

On the Quebec autonomy vs. Canadian unity axis, there is some inconsistency over time. The CMP and the Positional Word Count methods show a PLQ-ADQ leapfrog between 1994 and 1998, but the other methods (CMP compatible, dictionary, and Wordscore) don’t. On the left-right axis, parties leapfrog continually in the CMP output. With Wordscore, consistency is highest when previous platforms are used as reference texts.

Consistency is higher for Quebec-Canada cleavage than left-right. This is coherent with what we have found in outputs from different methods. That leads us to believe that the Quebec autonomy vs. Canadian unity is the most important cleavage in Quebec, the prime dimension of political space. Left-right dimension is often ill-defined

in Quebec political space, as CMP and Wordscore outputs indicate.

There is no silver bullet. No method can, at this stage, provide us with valid, plausible, and consistent results. We can't assess consistency of the expert and mass survey methods, because there is no data prior to 2007. Because it is impossible to survey retroactively, this is a serious limit for future research. We will have to wait 2-3 more elections to gather sufficient data to do this kind of temporal analysis. Also, the lack of data makes cross-provincial comparison impossible. This is why we will focus on textual data for future research. Among the textual data methods, Wordscore is the only method that has an uncertainty measurement. It is not surprising then to find out that it is also the most valid method overall. Result of dictionary and CMP methods are potentially invalid, because there is no clear way to make a difference between types of error: measurement error, random error, invalid data, etc. Wordscore output has a confidence interval. If there is no overlapping, the parties are statistically different in their respective positioning on the scale. If there is overlapping, there is a chance that they are not statistically different. This is a simple way to determine the validity of Wordscore outputs. External validity is high in this case.

There is a trade-off between internal and external validity. As we have seen, Wordscore outputs are not particularly consistent over time, nor plausible. The relative inconsistency of Wordscore results is the direct consequence of the a priori selection of reference texts. The choice of what is a reliable (or not) reference text and the initial party positioning have a clear influence on

the output. Consistency is abysmal for Québec lucide-Québec solidaire manifestos, and validity is very low. So the utilization of such reference texts is in questionable.

The same things can be said about the dictionary method. The choice of the words that will be included in the dictionary is a subjective human intervention in the process. Adding or subtracting a word can have a strong impact on the final results, especially when there are few words in the dictionary, as it is in this case.

On the other hand, CMP outputs have lower level of external validity, yet they are more consistent. The definition of what is left or right, Quebec autonomy or Canadian unity issues is constantly redefined in a posteriori perspective. Interpretation of what is left or right, Quebec autonomy or Canadian unity is made after the analysis is made. It is a highly subjective process, but it leads to more consistent results. But external validity is not directly measurable. There is the inter-coder agreement rate, but it can’t be turned into a clear measure of uncertainty as the confidence interval is. Applicability of the CMP grid in the Canadian provinces is also an issue. a

Computer-assisted textual analysis is still a relatively new research avenue. While computerization may help eliminate time-consuming operations such as coding, we conclude that they are far from being perfect. As different results with dictionary and Wordscore outputs show us, human intervention can’t be avoided and a priori selection of reference texts and words is still a subjective process prone to human subjectivity, and of course human error.

References

Abizadeh, S. and J. A. Gray (1992). "Politics and Provincial Governement Spending in Canda." Canadian Public Administration **35**(4): 519-533.

Aktouf, O., M. Asselin, et al. (2005). Manifeste pour un Québec solidaire.

Benoit, K. and M. Laver (2007). "Estimating party policy positions: Comparing expert surveys and hand-coded content analysis." Electoral Studies **26**(1): 90-107.

Blondel, J. (1968). "Party Systems and Patterns of Government in Western Democracies." Canadian Journal of Political Science / Revue canadienne de science politique **1**(2): 180-203.

Bouchard, L., J. Facal, et al. (2005). Manifeste pour un Québec lucide.

Budge, I. (2000). "Expert Judgements of Party Policy Positions: Uses and Limitations in Political Research " European Journal of Political Research **37**.

Budge, I. and D. J. Farlie (1983). Explaining and Predicting Elections. Issue Effects and Party Strategies in Twenty-Three Democracies. Londres, George Allen & Unwin.

Budge, I. and R. I. Hofferbert (1990). "Mandates and Policy Outputs: U.S. Party Platforms and Federal Expenditures." American Political Science Review **84**(1): 111-131.

Budge, I., H.-D. Klingemann, et al. (2001). Mapping Policy Preferences. Estimates for Parties, Electors, and Governments 1945-1998. Oxford University Press, Oxford University Press.

Budge, I., D. Robertson and D. Hearl, Eds. (1987). Ideology, Strategy, and Party Change: Spatial Analysis of Post-War Elections Programmes in Nineteen Democracies. Cambridge, Cambridge University Press.

Castles, F. G. and P. Mair (1984). "Left-Right Political Scales: Some Expert Judgments." European Journal of Political Research **12**: 73-88.

Crête, J. and N. Diallo (2007). Does it Make a Difference if the Government is from the Left or the Right? A Qualitative Answer with Numbers. SQSP Annual Conference. Université Laval, Quebec City.

Downs, A. (1957). An Economic Theory of Democracy. New York, Harper.

Gibbins, R. and N. Nevitte (1985). "Canadian Political Ideology: A Comparative Analysis." Canadian Journal of Political Science / Revue canadienne de science politique **18**(3): 577-598.

Huber, J. and R. Inglehart (1995). "Expert Interpretations of Party Space and Party Locations in 42 Societies." Party Politics **1**(1): 73-111.

Inglehart, R. and H.-D. Klingemann (1976). Party Identification, Ideological Preference and the Left-Right Dimension among Western Mass Publics. Party Identification and Beyond:

Representations of Voting and Party Competition. I. Budge, I. Crewe and D. J. Farlie. New York, Wiley & Sons.
Kleinnijenhuis, J. and P. Pennings (1999). A Probabilistic Keyword Approach to Textual Analysis. Mannheim Joint Sessions of the ECPR. Mannheim.
Kleinnijenhuis, J. and P. Pennings (2001). Measurements of Party Positions on the Basis of Party Programmes, Media Coverage, and Voter Perceptions. Estimating the Party Position of Political Actors. M. Laver. New York, Routledge: 162-182.
Klingemann, H.-D., I. Budge and R. I. Hofferbert (1994). Parties, Policies, and Democracy. Boulder, Westview Press.
Laver, M. (1998). "Party Policy in Britain 1997: Results from an Expert Survey." Political Studies **46**(2): 336-347.
Laver, M., Ed. (2001). Estimating the Policy Position of Political Actors. New York, Routledge.
Laver, M. and K. Benoit (2005). "Estimating Party Policy Positions: Japan in Comparative Context." Japanese Journal of Political Science **6**(2): 187-209.
Laver, M., K. Benoit and J. Garry (2003). "Extracting Policy Positions from Political Texts Using Words as Data." The American Political Science Review **97**(2): 311-331.
Laver, M. and I. Budge (1992). Party Policy and Government Coalitions. New York, MacMillan.
Laver, M. and J. Garry (2000). "Estimating Policy Positions from Political Texts." American Journal of Political Science **44**(3): 619-634.
Laver, M. and W. B. Hunt (1992). Policy and Party Competition. New York, Routledge.
Laver, M. and K. A. Shepsle (1994). Cabinet Ministers and Parliamentary Government. Cambridge, Cambridge University Press.
Mair, P. (1999). Searching for the Positions of Political Actors: A Review of Approaches and an Evaluation of Expert Surveys in Particular. ECPR Joint Sessions: Workshop on Estimating the Policy Positions of Political Actors. University of Mannheim.
Marks, G., L. Hooghe, et al. (2007). "Crossvalidating data on party positioning on European integration." Electoral Studies **26**(1): 23-38.
Pétry, F. (2006). Comparaison chiffrée des plateformes électorales. Le Parti libéral. Enquête sur les réalisations du gouvernement Charest. F. Pétry, É. Bélanger and L. M. Imbeau. Québec, Presses de l'Université Laval: 67-81.
Pétry, F. and R. Landry (2001). Estimating Inter-Party Distances from Election Programmes in Quebec, 1970-89. Estimating the Party Position of Political Actors. M. Laver. New York, Routledge: 133-146.
Québec (1995). Référendum 95 : Non, Directeur Général des élections du Québec: 9.
Québec (1995). Référendum 95 : Oui, Directeur Général des élections du Québec: 10.

Rabinowitz, G. and S. E. Macdonald (1989). "A Directional Theory of Issue Voting." The American Political Science Review **83**(1): 93-121.

Ray, L. (2001). A Natural Sentence Approach to the Computer Coding of Party Manifestos. Estimating the Positions of Political Actors. M. Laver. New York, Routledge: 149-161.

Sartori, G. (1976). Parties and Party Systems. A Framework for Analysis. Oxford, Oxford University Press.

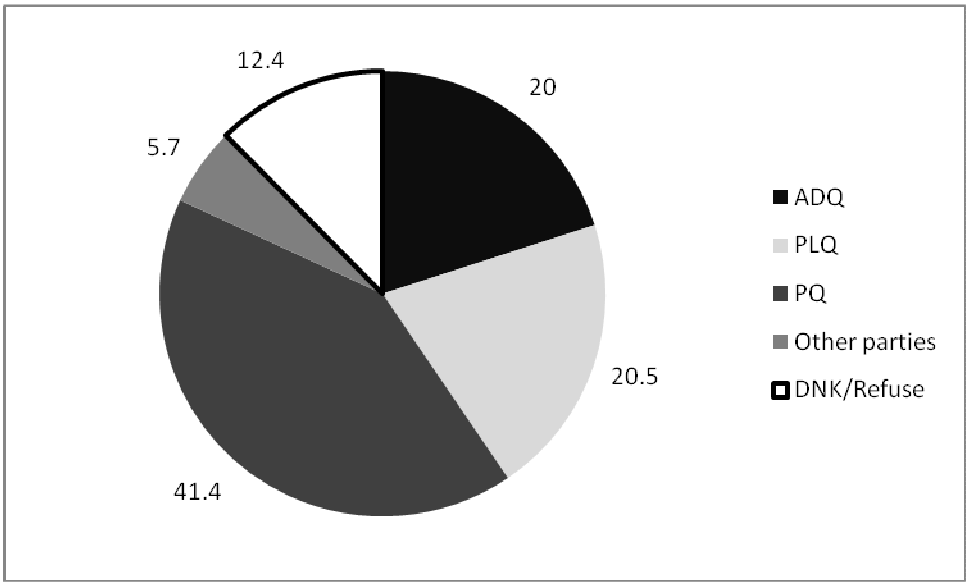
Volkens, A. (2001). Manifesto Research since 1979: From Reliability to Validity. Estimating the Party Position of Political Actors. M. Laver. New York, Routledge: 33-49.

Volkens, A. (2002). Manifesto Coding Instructions. Berlin, Wissenschaftszentrum Berlin für sozialforschung.

Figures and Tables

Figure 1. Perception of Which Party is Best to Defend Quebec's Autonomy.

What is the best party to defend Quebec's interests?



What is the best party to defend Quebec's identity and culture?

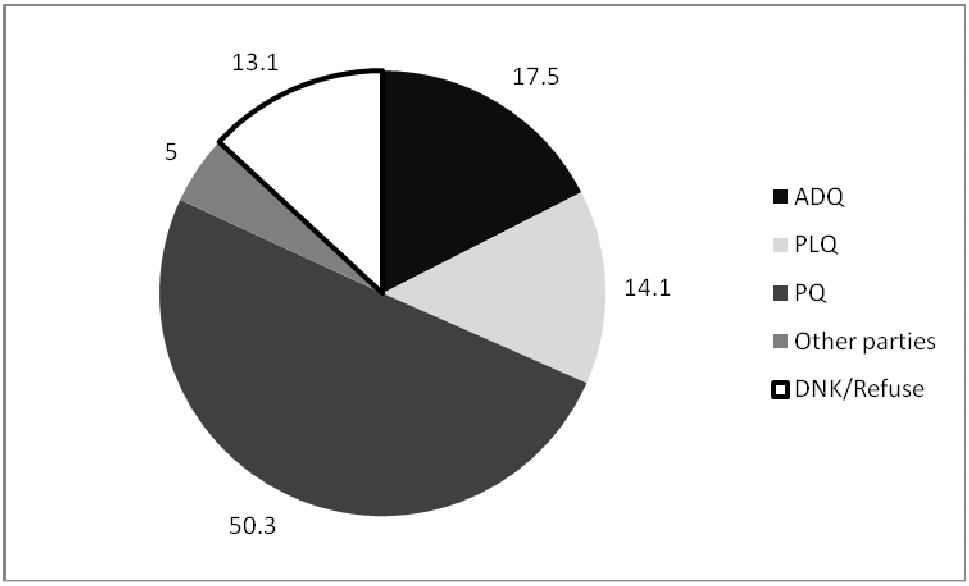


Table 1. Positions of six Quebec premiers on scale from 1 (left) to 9 (right) according to experts

Premier	Left-right score
Jean Lesage (Liberal)	5.35
Daniel Johnson (Union nationale)	1.63
Jean-Jacques Bertrand (Union nationale)	1.52
Robert Bourassa I (Liberal)	4.98
René Levesque (PQ)	8.59
Robert Bourassa II (Liberal)	4.60

Source : Abizadeh and Gray (1992)

Table 2. Descriptive Statistics of Party Positions on the Left vs. Right and on the Quebec Autonomy vs. Canadian Unity Cleavages from Expert Survey

Question	**Party**	**Mean**	**Std. Dev.**	**Min**	**Max**
Left-Right	ADQ	16.4	1.65	13	20
	PLQ	12.7	2.08	6	17
	PQ	8.5	2.05	5	14
Quebec Autonomy-Canadian Unity	ADQ	8.8	2.81	4	18
	PLQ	13.9	3.26	7	20
	PQ	2.6	1.34	1	6

Figure 2. Party Positions on the Quebec Autonomy vs. Canadian Unity Cleavage from Expert Survey

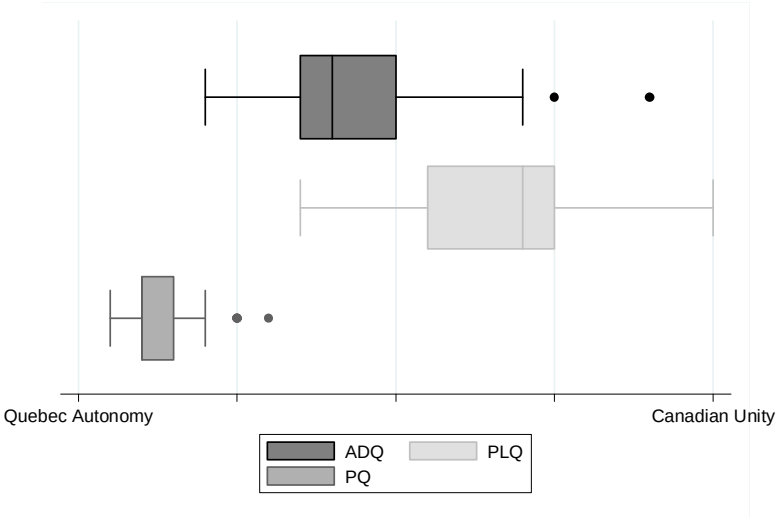


Figure 3. Party Positions on the Left-Right Cleavage from Expert Survey

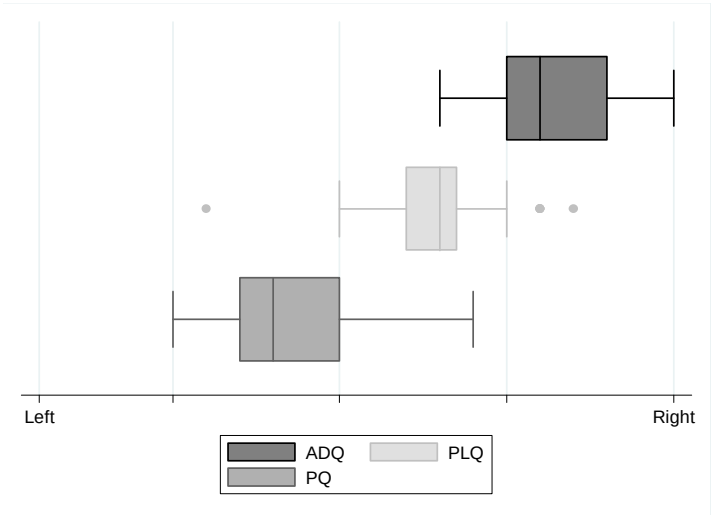


Table 3. CMP Method Coding Results and Inter-coder Agreement

Party	Coded units	Un-coded units	Total	% of un-coded units	Inter-coder agreement
PQ	279	21	300	7%	>75%
PLQ	192	15	207	7%	>75%
ADQ	126	4	130	3%	>75%

Figure 4. Party Positions on Quebec Autonomy-Canadian Unity Cleavage from CMP

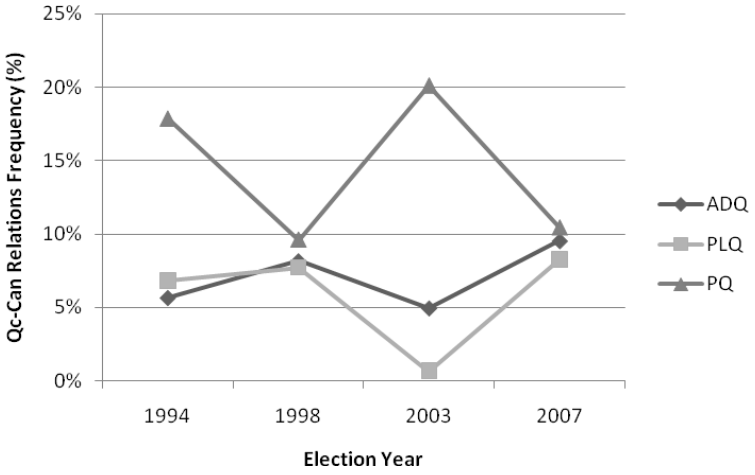


Figure 5. Party Positions on Left-Right Cleavage from CMP

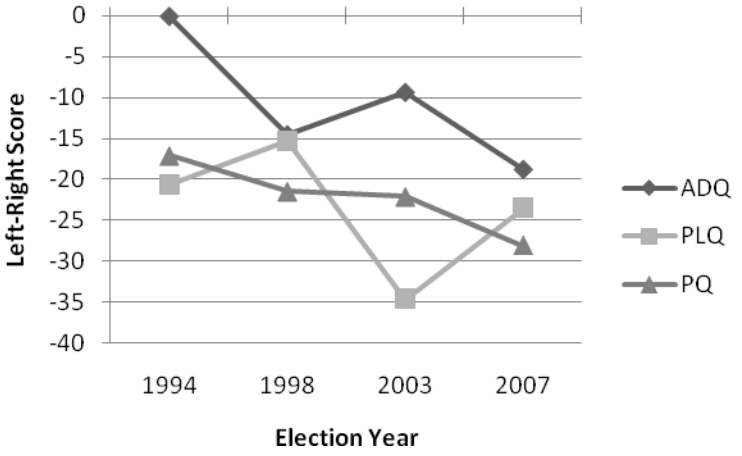


Figure 6. Party Positions on Quebec Autonomy-Canadian Unity Cleavage from Positional Word Count

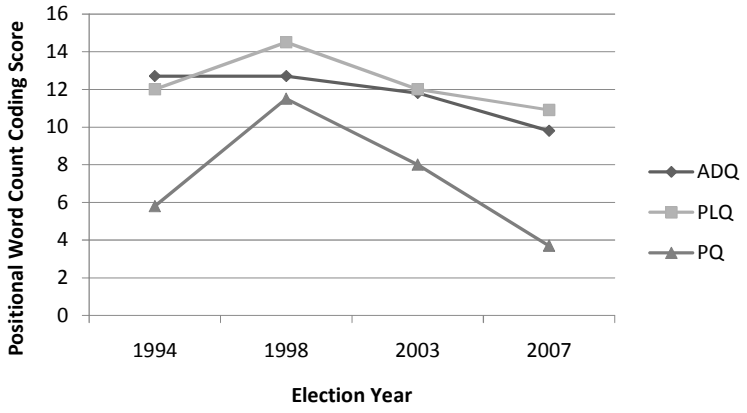


Figure 7. Party Positions on Quebec Autonomy-Canadian Unity Cleavage from CMP Compatible Coding

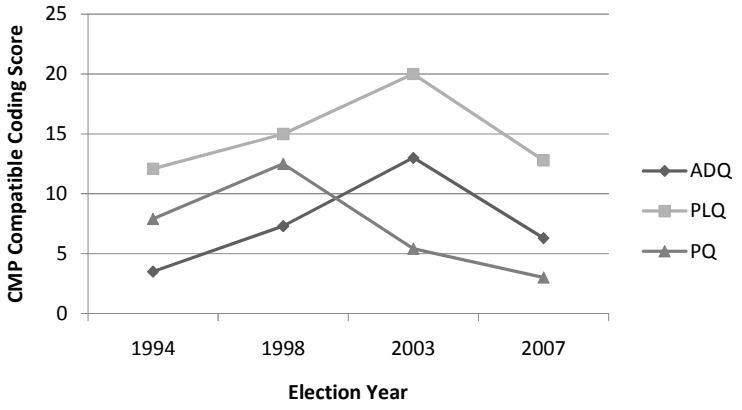


Figure 8. Predicting the Position of a Political Text with Wordscore

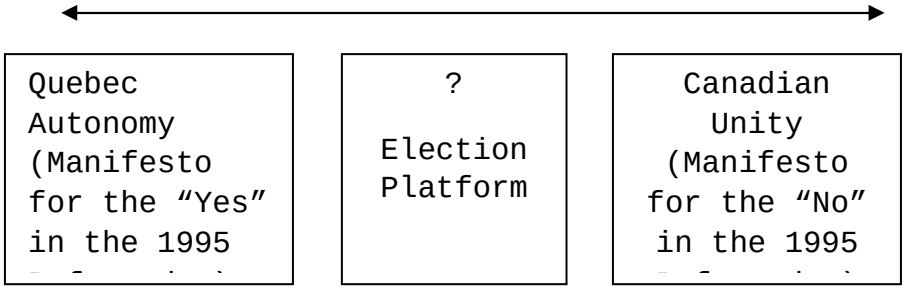


Figure 9. Party Positions on Quebec Autonomy-Canadian Unity Cleavage from Wordscore

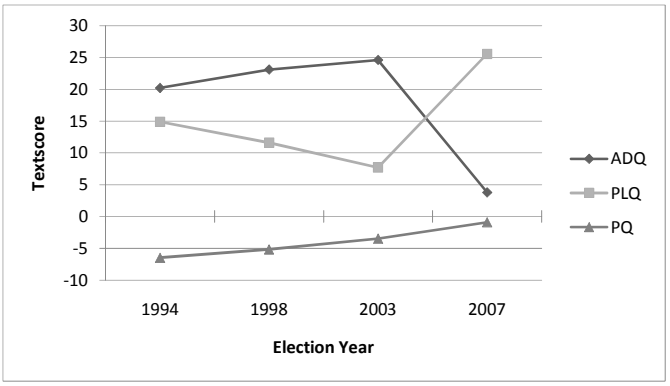


Table 4. Interpretation of Wordscore data on party positions on the left vs. right and on the Quebec autonomy vs. Canadian unity Cleavages (1994-2007)

Cleavages	**Plausibility**	**Distinctiveness**
Left-Right	Low (Party ranking match expert survey 2 times/7)	Medium (Statistical difference between Party 4 times/7)
Quebec Autonomy vs. Canadian Unity	Low (3/7)	High (6/7)

Table 5. Are the estimates plausible and consistent?

	Quebec autonomy 2007	Quebec autonomy over time	Left-right 2007	Left-right over time
Mass survey	Partially plausible (ADQ and PLQ not different)	n.a.	n.a.	n.a.
Expert survey	Entirely plausible	n.a.	Entirely plausible	n.a.
CMP	Partially plausible (ADQ, PLQ and PQ not different)	Consistent (ADQ and PLQ leapfrog between 94 and 98)	Entirely plausible	Partially consistent (PLQ and PQ leapfrog continually)
Positional Word Count	Entirely plausible	Consistent (ADQ and PLQ leapfrog between 94 and 98)	n.a.	n.a.
CMP Compatible	Entirely plausible	Partially consistent (ADQ and PQ leapfrog between 98 and 03)	n.a.	n.a.
Wordscore	Entirely plausible	Partially consistent (ADQ and PLQ leapfrog between 03 and 07)	Partially plausible (PLQ and PQ not statistically different)	Partially consistent (previous programmes) or Non-consistent (Qc lucide-solidaire)

Appendix A: Expert survey questions

Please indicate on a scale of 1 to 20 where you would place Quebec's main political parties on five important ideological cleavages. The meaning of the scales is provided with each cleavage.

Left-right scale

1 to 5: Left

6 to 10: Center-left

11 to 15: Center-right

16 to 20: Right

Quebec-Canada scale

1 to 5: Increase Quebec's autonomy at the cost of breaking up Canadian unity

6 to 10: Increase Quebec's autonomy but not at the cost of breaking up Canadian unity

11 to 15: Strengthen Canadian unity but not at the cost of decreasing Quebec's autonomy

16 to 20: Strengthen Canadian unity at the cost of decreasing Quebec's autonomy

Please rate the relative importance of the five preceding cleavages to each of Quebec's main political parties on a scale of 1 to 20, where 1 means very little importance to the party and 20 means very high importance to the party.

Appendix B: Wordscore outputs

Table 1. Descriptive Wordscore Statistics of Party Positions on the Left vs. Right and on the Quebec Autonomy vs. Canadian Unity Cleavages in the 2007 General Election

Cleavages	**Party**	**Mean**	**S.E.**	**95 % conf. Interval**	
				Min	**Max**
Left-Right (Qc solidaire 0 ;Qc lucide 20)	ADQ	-6,5	4,2	-14,9	1,9
	PLQ	19,5	3,0	13,6	25,4
	PQ	16,2	4,1	8,0	24,3
Left-Right (PQ2003 0 ; PLQ2003 10 ; ADQ2003 20)	ADQ	21,1	1,58	17,9	24,3
	PLQ	1,9	1,07	-0,3	4,0
	PQ	6,8	1,57	3,7	10,0
Quebec Autonomy-Canadian Unity (Yes manifesto 0 ;No manifesto 20)	ADQ	3,8	6,0	-8,2	15,8
	PLQ	25,6	6,2	16,5	34,7
	PQ	-0,9	4,6	-13,4	11,6
Quebec Autonomy-Canadian Unity (PQ2003 0 ; ADQ2003 10 ; PLQ2003 20)	ADQ	12,1	1,76	8,5	15,5
	PLQ	18,4	1,39	15,6	21,2
	PQ	-1,2	1,77	-4,7	2,3

Light grey cells: two overlapping confidence intervals

Dark grey cells: three overlapping confidence intervals

Table 2. Descriptive Wordscore Statistics of Party Positions on the Left vs. Right and on the Quebec Autonomy vs. Canadian Unity Cleavages in the 2003 General Election

Cleavages	**Party**	**Mean**	**S.E.**	**95 % conf. Interval**	
				Min	**Max**
Left-Right (Qc solidaire 0 ;Qc lucide 20)	ADQ	9,8	7,1	-4,4	24,1
	PLQ	-4,4	10,1	-24,6	15,8
	PQ	23,9	7,0	9,9	37,9
Left-Right (PQ1998 0 ; PLQ1998 10 ; ADQ1998 20)	ADQ	17,8	1,2	15,4	20,2
	PLQ	11,7	1,6	8,5	14,9
	PQ	-1,7	1,1	-3,9	0,5
Quebec Autonomy-Canadian Unity (Yes manifesto 0 ;No manifesto 20)	ADQ	24,6	2,5	19,6	29,7
	PLQ	7,6	3,7	0,3	15,0
	PQ	-3,5	2,4	-8,3	1,4
Quebec Autonomy-Canadian Unity (PQ1998 0 ; ADQ1998 10 ; PLQ1998 20)	ADQ	14,1	1,8	10,6	17,6
	PLQ	16,5	2,4	11,6	21,3
	PQ	-1,9	1,7	-5,3	1,5

Table 3. Descriptive Wordscore Statistics of Party Positions on the Left vs. Right and on the Quebec Autonomy vs. Canadian Unity Cleavages in the 1998 General Election

Cleavages	**Party**	**Mean**	**S.E**	**95 % conf. Interval**	
				Min	**Max**
Left-Right (Qc solidaire 0 ;Qc lucide 20)	ADQ	22,1	12,1	-2,1	46,2
	PLQ	-5,8	9,2	-24,2	12,6
	PQ	12,5	7,0	-1,5	26,5
Left-Right (PQ1994 0 ; PLQ1994 10 ; ADQ1994 20)	ADQ	20,9	1,4	18,1	23,7
	PLQ	6,9	1,1	4,8	9,1
	PQ	1,5	0,8	-0,1	3,1
Quebec Autonomy-Canadian Unity (Yes manifesto 0 ;No manifesto 20)	ADQ	23,1	15,0	-6,8	53,1
	PLQ	10,1	11,6	-13,1	33,3
	PQ	-5,1	8,9	-22,9	12,6
Quebec Autonomy-Canadian Unity (PQ1994 0 ; ADQ1994 10 ; PLQ1994 20)	ADQ	20,1	2,6	14,8	25,4
	PLQ	9,7	2,1	5,4	14,0
	PQ	0,1	1,5	-3,0	3,2

Table 4. Descriptive Wordscore Statistics of Party Positions on the Left vs. Right and on the Quebec Autonomy vs. Canadian Unity Cleavages in the 1994 General Election

Cleavages	**Party**	**Mean**	**S.E**	**95 % conf. Interval**	
				Min	**Max**
Left-Right (Qc solidaire 0 ;Qc lucide 20)	ADQ	7,5	23,0	-38,5	53,5
	PLQ	-3,1	21,7	-46,5	40,3
	PQ	24,9	21,0	-16,8	66,7
Quebec Autonomy-Canadian Unity (Yes manifesto 0 ;No manifesto 20)	ADQ	20,2	1,7	16,8	23,6
	PLQ	14,9	1,6	11,6	18,1
	PQ	-6,5	1,5	-9.6	-3,5
Past Platform (PQ1989 0 ; PLQ1989 20)	ADQ	8,6	2,6	3,4	13,8
	PLQ	24,5	2,4	19,6	29,4
	PQ	-3,7	2,4	-8,6	1,2