PERSUASION, HEALTHCARE, VOTE INTENTIONS, AND NON-REPRESENTATIVE SAMPLES

PATRICK FOURNIER

Département de Science politique
Université de Montréal
C.P. 6128, Succursale Centre-ville
Montréal (Québec) H3C 3J7

patrick.fournier@umontreal.ca

Paper prepared for presentation at the 2003 annual meeting of the American Association for Public Opinion Research (AAPOR), Nashville, May 15-18. Navigator Inc. graciously provided the data analyzed within. Portions of arguments developed here were first presented with Pierre Martin and Richard Nadeau at the 2001 APSA and the 2002 CPSA annual meetings. My deepest thanks to André Blais, Angelo Elias and Simon McDougall for providing useful advice and assistance. I gratefully acknowledge financial assistance from the Fonds québécois de recherché sur la société et la culture (FQRSC).

Draft -- Comments and suggestions welcome

Persuasion, Healthcare, Vote Intentions and Non-Representative Samples

Patrick Fournier

At the root, politics is about persuasion. "It is literally the stuff of politics: whether the object is to deter nuclear attack, cajole an obdurate legislator, win over a Supreme Court justice, hold a supporter in place, or nudge a voter in a favorable direction, the end is persuasion" (Mutz, Sniderman and Brody, 1996: 1-2). Yet, despite the centrality of persuasion in politics and increased attention from the discipline, we have not developed an extensive understanding of the phenomenon. As Mutz, Sniderman and Brody have noted, "there is precious little evidence specifying who can be talked out of what beliefs, and under what conditions" (1996: 8).

This paper seeks to fill some of the gap by identifying the factors that can lead citizens to change their minds about their public policy opinions. The analysis focuses on two types of attitudes: opinion regarding increased healthcare spending and provincial vote intentions. It relies on two distinct sources of data: a telephone survey that was administered to a representative sample of residents in Ontario, and a pen-and-paper survey administered to a sample of undergraduate university students in Montreal. In both cases, the dependant variables are drawn from survey experiments which examine whether individuals' policy positions toward healthcare can be modified by exposing respondents to arguments that come into conflict with their opinions. An extensive list of potential individual determinants of political persuasion is examined: opinion strength, ambivalence, inconsistency, indifference, issue importance, political sophistication, and risk-aversion.

Context

Persuasion can be defined as a successful attempt to "influence others by modifying their beliefs, values or attitudes" (Simons 1976, 21). Social psychology has offered the most impressive and promising avenues to explain susceptibility to persuasion. Susceptibility to persuasion can be a function of subject characteristics that include, notably, personality traits (Janis and Hovland 1959), ego-involvement (Sherif, Sherif, and Nebergall 1965), salience (Fishbein, 1967), cognitive dissonance (Festinger 1957), adhesion to social norms or self-representation of norms (Fishbein and Ajzen 1975), and the amount of cognitive involvement with a given issue (Petty and Cacioppo 1986). Persuasion may also be affected by source characteristics such as credibility (Hovland, Janis, and Kelley 1953) and attractiveness (Eagly and Chaiken 1975); by message characteristics such as structure and content (O'Keefe 1990); and

by social context (Katz and Lazarsfeld 1955).

Although this research has considerably improved our understanding of persuasion in general, a case can be assembled about the particularities of political persuasion (Mutz, Sniderman, and Brody 1996). Comprehension of this specific form of persuasion, however, is much less advanced. Some even consider that we are only facing the "birth of a field of study" (Mutz et al., 1996: 1). In part, this flows from the nature of our data, which is generally cross-sectional. One can certainly point to a few classic studies of change which use panel or longitudinal designs (e.g., Hovland, Janis & Kelley, 1953), but the vast majority of empirical evidence is based on a cross-sectional approach which precludes the analysis of change. For instance, the data on political attitudes, beliefs, opinions and preferences has infrequently permitted examination of their dynamics. As a result, we have often concentrated our attention on static questions such as: what proportion of the population favours X, and why do people favour X. In contrast, we have more scarcely dealt with dynamic questions such as: what proportion of the population who favour X used to prefer Z, and why did people switch preferences from Z to X. Interest in political persuasion has rejuvenated in recent years (Mutz et al., 1996; Cobb & Kuklinski, 1997; Koch, 1998). Nevertheless, our understanding of the phenomenon remains sketchy, particularly with regards to the individual correlates of openness to persuasion.

Who can be induced to change their mind about political opinions? The present study focuses on this overly neglected topic. Seven potential individual determinants of political persuasion are considered. They are now presented in order of declining conceptual proximity to the opinions targeted by persuasion. First, there is *strength of opinion*. Whether you refer to the intensity of an opinion, to the confidence that a subject attaches to an opinion, or to the certainty that a subject expresses about an opinion, you draw on the notion of opinion strength. It is logical to expect that opinions which are weak, uncertain, unconfident or less intense would be susceptible to change. If fact, Alvarez and Brehm (1997) have presented uncertainty as the key source of variability in attitudes toward racial policies. Here, I will examine the role of uncertainty (strength of opinion) as a mediator of political persuasion.

The next three potential facilitators of persuasion are related. They all deal with the various considerations that people take into account when making a decision. To distinguish them, one can think about four scenarios with regards to the pattern of considerations: 1) individuals whose considerations are mostly congruent with their issue position (consistency), 2) individuals whose considerations are pulling toward contradictory issue positions (ambivalence), 3) individuals whose considerations are mostly incongruent with their issue position (inconsistency), and 4) individuals whose considerations are mostly neutral, not pushing toward any particular position (indifference). The three latter groups should all be more susceptible to

persuasion than the consistent group, but for different reasons.

Ambivalence refers to the extent to which the relevant considerations of a person's decision push toward opposing positions simultaneously (in contrast to considerations all consistent with a single position). This notion has appeared under various incarnations over the years: "memberships in groupings of different political allegiances which exert contradictory and opposing influences" (Lazarsfeld, Berelson & Gaudet, 1944; Berelson, Lazarsfeld & McPhee, 1954), "attitude conflict and consistency" (Campbell, Converse, Miller & Stokes, 1960), "opposing considerations that might lead them to decide the issue either way" (Zaller, 1992; Zaller & Feldman, 1992), "internalized conflict due to core beliefs in opposition to one another" (Alvarez & Brehm, 1995, 1997), and "the state of having positive and negative reactions to an evaluative target" (Guge & Meffert, 1998). These definitions differ only with regards to the items identified as the source of internal conflict: social allegiances (Lazarsfeld et al., 1944, 1954), attitudes (Campbell e al., 1960), considerations (Zaller, 1992; Zaller & Feldman, 1992), values (Alvarez & Brehm, 1995, 1997), and ideas and feelings (Guge & Meffert, 1998). My conception of the notion is closest to Zaller's (Zaller, 1992; Zaller & Feldman, 1992). I also consider that a political preference is determined by reasons for favouring one side of an issue rather than another, and that these reasons can be of various types (values, beliefs, opinions, perceptions, etc.).

We know that ambivalence has significant consequences on attitudes and behaviour. Ambivalent or cross-pressured individuals tend to favour the status quo rather than important political change (Nadeau & Fleury, 1994), to express more moderate and less certain political judgments (Guge & Meffert, 1998), to exhibit greater variability in survey response (Alvarez & Brehm, 1995), and to change their preferences more frequently (Zaller, 1992). The patterns observed by Alvarez & Brehm and Zaller leads us to expect that individuals with a higher level of ambivalence should be more susceptible to persuasion. People experiencing little ambivalence, since they are insulated a comfortable state of cognitive consonance, should be relatively impervious to attempts at modifying their political preferences. In contrast, individuals who are torn between two positions, who have reasons to support each side of an issue, should prove less impermeable to persuasion attempts, and they may even welcome them as a way to resolve their internal conflict.

Inconsistency refers to an issue position which is not sustained by various motivations, because the issue's relevant considerations are in fact inciting the individual to take the reverse position. It is difficult to account for how a person would find him/herself in such a situation, but it is safe to say that this person's should be responsive to persuasive attempts. Bringing someone to abandon opinion X and adopt opinion Y must be easier if the initial opinion is unanchored by relevant beliefs/attitudes and if these predispositions already encourage support

for opinion Y. Hence, persuasion should be more likely among opinions which experience a high level of inconsistency.

Indifference refers to having a large number of considerations which are neutral in nature, considerations where the respondent is undecided, considerations where the respondent takes a moderate position, considerations which do not decisively push toward a certain decision whether it be support or opposition. It is reasonable to expect that people who do not have many reasons to support either side of an issue probably have opinions about that issue which are vulnerable to persuasion. Therefore, the more numerous neutral considerations a person holds, the higher the indifference, the greater the likelihood of persuasion should be.

Fifth, *issue importance* can be defined as "the degree to which a person is passionately concerned about and personally invested in an attitude" (Krosnick, 1990: 60). Krosnick's research on the topic (1988, 1990) provides evidence that important issue positions are modified les frequently than unimportant ones. "Policy attitudes that citizens consider important are highly accessible in memory, are highly resistant to change, are highly stable over time, are extensively linked to and consistent with individuals' basic values, instigate polarized perceptions of competing presidential candidates' policy attitudes, and are powerful determinants of candidate preferences" (Krosnick, 1990: 70). It is a reasonable expectation to think that persuasion attempts ought to be more successful among issues which individuals do not deem important than among those of high importance.

The previous potential determinants of political persuasion are located very close to the opinions which are the subject of persuasion attempts. They are specific to each decision. The last two potential determinants move toward a wider perspective. They constitute more general predispositions toward attitude change.

Sixth, I will consider the potential mediating force of *political sophistication*. This factor has been identified as determinant of susceptibility to agenda-setting, framing and priming effects (Iyengar, Peters & Kinder, 1982; Iyengar & Kinder, 1987; Kinder & Sanders, 1990; Krosnick & Kinder, 1990; Krosnick & Brannon, 1993; Miller & Krosnick, 1996), ideologically-guided attitude consistency (Judd & Krosnick, 1989; Judd & Downing, 1990; Jacoby, 1991), information-processing (Lodge, McGraw & Stroh, 1990; Fiske, Lau & Smith, 1990; McGraw, Lodge & Stroh, 1990; McGraw & Pinney, 1990; McGraw & Steenbergen, 1995), issue-voting (Luskin & Ten Barge, 1995), interpersonal heterogeneity (Stimson, 1975; Sniderman, Brody & Tetlock, 1991; Fournier, 2000), and attitude change (Zaller, 1992, 1996). Sophistication could also be a determinant of susceptibility to political persuasion. The expectation is that sophisticated people, since they possess large, wide-ranging and interconnected belief systems, should be better equipped to withstand counterarguments than individuals with a more limited understanding of politics.

Finally, there is risk-aversion. "Although a given individual's attitude towards risk-taking may vary somewhat across different types of decisions, the psychological literature gives some support to the notion that attitude towards risk-taking is a fairly stable and reliable personality trait, which can serve as a basis for differentiating individuals" (Nadeau, Martin & Blais, 1999: 527). In the case of political persuasion, the idea is that people who accept taking risks with great difficulty should be reluctant to consider information conflicting with their prior beliefs as valid and to consider switching sides in response to this information. Persuasion should therefore be lower among the risk-averse.

Thus, to summarize:

Hypothesis 1: Persuasion should be more likely among people who are not confident about their position.

Hypothesis 2: Persuasion should be more likely among people who are torn between two positions.

Hypothesis 3: Persuasion should be more likely among people who have many reasons to support a position contrary to their own opinion.

Hypothesis 4: Persuasion should be more likely among people who do not have many reasons to support a position.

Hypothesis 5: Persuasion should be more likely among people who feel that the issue is not important.

Hypothesis 6: Persuasion should be more likely among people who are not sophisticated politically.

Hypothesis 7: Persuasion should be more likely among people who easily accept taking risks.

The Usefulness of Non-Representative Samples

Researchers frequently encounter limitations. Most notably, the data available often constrain the type of questions that can be tackled, the cases that can be studied, and the analyses that be accomplished. Cost and feasibility problems can prevent an interesting enquiry from taking place. For instance, survey research is quite expensive. One needs hefty financial resources to have a questionnaire administered to a representative sample of the population. But is there a shortcut?

The statistical methods used to infer population estimates all rely on a simple but fundamental assumption; randomness must govern the constitution of samples. Often though, social sciences rely heavily on non-random samples composed of undergraduate students considered to be cheap and reliable subjects. For example, Sears (1986) has estimated that, between 1980 and 1985, a little more than 80% of the research made in social psychology relied

exclusively on undergraduate students. Do these samples really produce valid inferences? Is generalization possible?

First, there is counterintuitive but mounting evidence that low response rates – and the accompanying non-randomness of samples – do not hinder data quality (e.g., Holbrook, Pfent & Krosnick, 2003). Notably, Putnam and Yonish (n.a) compare the distribution of answers to similar social capital questions captured by the General Social Survey and a non-representative commercial mail-in questionnaire. They consider that the two distributions match very closely and that both datasets allow for the same conclusions to be drawn. "In many cases, [then], among all sources of survey error, low response rate or non-random respondent selection may be relatively benign compared to other design features" (Putnam & Yonish, n.a., 23).

Do these indications stand when we are dealing with a radically non-representative sample, made only of undergraduate students? It is sensible to think that university students differ significantly from the population as a whole on several dimensions, most obviously their education level and youth. Sears (1985) even proposes that research is in fact dealing with not fully developed individuals which tend "to have incompletely formulated senses of self, rather uncrystallized sociopolitical attitudes, unusually strong cognitive skills, strong needs for peer approval, tendencies to be compliant to authority, quite unstable group relationships, little material self-interest in public affairs, and unusual egocentricity" (Sears, 1985: 527).

Yet, we have relatively few direct evidence showing a real discrepancy, or lack thereof, between undergraduate samples and random samples in the distribution of variables. Ward (1993) examined the distribution of answers on four psychological constructs: the locus of control, the need for achievement, the competition/cooperation preferences, and the need for cognition. He failed to find significant differences between undergraduate students and adults on the four psychological dimensions, safe one. In a meta-analytical study of the validity of student jury simulations, Bornstein (1999) shows that the majority of research examining this question could not find any statistical evidence that undergraduate students behave differently in jury simulations than adult citizens.

By definition, one must be cautious before generalizing the results obtained with an undergraduate student sample. On one hand, students appear to be more volatile, dependent on others for self-definition, and compliant to authority than random adults. On the other hand, there is almost no evidence that undergraduate student samples bias the results of investigations to an irreparable extent. We are tentatively lead to conclude that student datasets, while they can hardly be used to formulate population distribution estimates, can probably be employed safely to test relationships and make causal inferences (Berkowitz & Donnerstein, 1982).

This paper seeks to verify the applicability of this conclusion to the study of political persuasion. The analysis is based on two distinct surveys. One is a random digit dialling (RDD)

telephone survey of a representative sample of residents of Ontario (N = 655). The survey was conducted in October 2002 by Navigator Inc. A portion of the survey, which mostly concentrates on healthcare, was specifically designed to examine persuasion and its determinants. These elements were replicated in a survey of undergraduate university students. The survey, a segment of which is a panel, was conducted in February and April 2003 among first-year students in communication, criminology, economics, industrial relations, political science, and sociology courses at the Université de Montréal (N = 316). Apart from the healthcare persuasion component, this survey also investigates persuasion within the context of the 2003 Québec provincial electoral campaign.

The analysis proceeds in two stages. I will first perform the same examinations of persuasion on attitudes toward healthcare in the two surveys to assess whether the non-random university student sample can nevertheless offer useful insight. As far as I have been able to ascertain, this is the first representative / non-representative samples replication attempt to rely on such similar evidence. If the use of student data on political persuasion can be validated, I will then extend the investigation of persuasive influence to a very recent electoral scene: this spring's provincial election in Québec.

Study

This paper uses survey experiments to identify who can be persuaded to change their minds political opinions. While not possessing the dominance that they have achieved in psychology, experiments are increasingly used in political science (Kinder & Palfrey, 1993; Sniderman, 1993). Most notably, they have transformed public opinion surveys from flat and linear instruments into innovative and dynamic research tools. Experiments allow researchers to expose random portions of a sample to different stimuli and treatments. They can notably be used to present various arguments to different subgroups of respondents and see whether their opinions are consequently affected (Cobb & Kuklinski, 1997). Our data rely on this approach.

In both surveys, persuasion was capture in a straightforward but non-aggressive fashion. Respondents were first asked their opinion concerning one public policy issue (increasing health funding) and/or one electoral decision (Québec electoral vote intentions). After having expressed their position, respondents encountered an argument which challenges their position. On healthcare, those who opposed increasing health spending were assigned to a positive argument which justifies the policy, while those who supported the proposal were assigned to a negative argument which criticizes the policy. On vote intentions, each party supporter received a negative argument which points out some of the weaknesses of the respondent's preferred party. To avoid any artificial push induced by the argument, respondents were told that the

argument may or may not have influenced their position. They were finally asked again to state their opinion. The analysis will examine which individuals tend to change their mind in response to the argument. I will only concentrate on true reversals of opinion: for instance, moving from opposition to support for increased health spending, and vice-versa. I will not consider movement from strongly (dis)agree to somewhat (dis)agree and vice-versa as instances of persuasion.[1]

Now for the potential determinants of political persuasion, again in order of declining proximity to the political opinions. First, the indicator for strength of opinion is drawn from a simple question asking respondents to rate the certainty of their position. This question, administered immediately after the initial question about increased health funding and vote intentions, should reflect the intensity / confidence of these opinions. An individual who feels very certain about his/her position scores high on the opinion strength scale, while an individual who expresses little certainty scores low.

To operationalize ambivalence, inconsistency and indifference, I turn to a series of questions. All items which are correlated to an opinion under scrutiny were treated as relevant considerations. Multivariate regression identified five items as relevant considerations for the health spending issue and four items for each party's support (they are listed in the Appendix). I then coded responses to these items as either consistent with the respondent's initial position, neutral (discrete or moderate), or inconsistent with the respondent's position. The indicators of ambivalence and inconsistency are drawn from the difference between the proportion of inconsistent considerations and the proportion of consistent considerations. The lower half of the difference index is converted to an ambivalence scale, while the upper half of the difference index is converted to an inconsistency scale. A high score on the ambivalence scale reveals that an individual is torn between two positions because he/she possesses reasons to support each side of the issue. A low score reveals an individual whose considerations reinforce his initial issue position. Scoring high on the inconsistency scale means that the individual only has considerations which are inconsistent with his/her initial position. Scoring low on the inconsistency scale means having a number of consistent considerations which is greater or equal to the number of inconsistent considerations. The indicator of indifference is simply the sum of neutral considerations. A person with a high indifference score holds few reasons to support either side of an issue, while a person with a low score holds many.

To capture the issue importance pertinent for attitudes regarding government spending on health, I rely on items tapping the general salience of health. I combine answers elicited by two questions about the importance of health: one open-ended, one close-ended. I have elsewhere presented evidence that this measurement strategy outperforms both the open-ended and the

[1] For greater details on this and other variables, see the Appendix.

close-ended indicators in identifying those who consider that an issue is important (Fournier, Blais, Nadeau, Gidengil & Nevitte, 2003). High health salience corresponds to a high mark on the issue importance index, while low salience corresponds to a low mark. The equivalent measure for vote intentions is interest in the election. Individuals expressing great interest score high on issue importance, while those with little interest score low.

As for political sophistication, following the lead of previous work, I sought measures of general factual knowledge (Luskin, 1987; Fiske et al., 1990; Zaller, 1990; Delli Carpini & Keeter, 1993). In the Ontario survey, I use an index of the respondent's ability to name the leaders of the three main provincial political parties and the name of the commissioner of the Commission on the Future of Healthcare in Canada. In the university survey, I use an index of the respondent's ability to name the Quebec Minister of the environment, the Premier of Ontario, the Canadian Prime Minister when the Free Trade Agreement was signed with the United States, and the capital of California. Correct responses to all four questions translate into a high value on the political information index, while many incorrect or don't know answers translate into a low value.

The most general disposition, risk-aversion, is measured in both questionnaires by a question tapping the respondent's self-reported difficulty in accepting to take risks. "This simple measure has strong internal and external validity" (Nadeau, Martin & Blais, 1999: 530). The variable takes a high value when people consider it very difficult to accept taking risks, and a low score when they find it very easy.

These six factors are used to attempt to explain individual variation in susceptibility to political persuasion. Some sociodemographic controls are also included in the explanatory models when appropriate: education, age, gender, and income.

Results

Healthcare: The Validation of Student Surveys

Can undergraduate surveys provide useful inferences about political persuasion? Similar questions regarding the issue of health funding included in the Ontario and Université de Montréal surveys are used to compare the distributions of attitudes, the correlations between attitudes, the extent of persuasion, and the determinants of persuasion among both samples. Two caveats which hinder the comparison should be kept in mind. The two surveys occurred in two different provinces, and six months apart from each other (one before and one after a federal-provincial agreement that announced a hike in public health expenditures). Therefore, discrepancies between samples will not necessarily be attributable to their contrast in representativeness.

Table 1 reports the marginal frequencies of variables connected to public healthcare spending. The two samples exhibit attitudes which resemble each other a great deal. When a group expresses majority support for a position, the other group tends to do so as well (e.g., protect Medicare even if taxes go up). The same pattern is found when opinion is more split (e.g., overall quality of healthcare) and when support is low (e.g., governments shouldn't pay for all people). Still, statistically significant differences between the two surveys are observed among six of the nine attitudes. The undergraduate university students are generally more favourable toward an augmentation of public health expenditures than the random adult sample (government should increase spending, problems are result of lack of money, spend better instead of spend more).[2] Students are also less likely to blame people for using the healthcare system when they don't need to, and more likely to be pessimistic about meeting public expectations without bankrupting the system. In sum, the distributions of the two samples often differ, but they are never at opposite ends of the spectrum.

Table 2 presents the multivariate links between support for increased health spending, the subject of persuasion attempts, and all plausible related items.[3] The results are amazingly similar in both surveys. Apart from one variable, the same attitudes are significant predictors of opinion about health funding in both models, the signs of these effects are identical, and their order of magnitude are comparable. The sole exception is the attitude toward public expectations which is only significantly correlated to healthcare spending in the university student sample. Next, I determine whether causal inferences about persuasion are also analogous in both samples.

Figures 1 and 2 present the aggregate movement in opinion about healthcare funding that can be generated by the counterargument experiments. The results allow us to ascertain whether opinion about an issue is fixed or malleable, whether people can be persuaded to change their mind. Despite the fact that health is the most salient public issue in Ontario, the provincial survey experiments on support for increasing health spending reveal that significant changes in opinion can be induced by a single piece of contrary information (see Figure 1). Exposing respondents to a counterargument convinced many of them to switch sides. The three positive arguments are equally powerful, each raising overall support for greater spending by 14 percentage points on average. All three negative arguments have a similar but opposite impact, lowering support by 11 percentage points on average, each below the critical 50% threshold. All in all, a quarter of respondents (25%) changed their opinion.

Contrary to Sears' expectation (1985), the student sample is not more volatile then the

[2] Note, youths are less likely to think that current level of funding is inadequate to maintain the current standards of healthcare. However, this difference could be compatible with the group's other differences if students consider their own standards to be higher than the rest of the population's standards.

[3] These estimations identify the relevant considerations used in the construction of the indicators of ambivalence, inconsistency, and indifference.

random adult sample. Approximately 14% of youths could be convinced to modify their opinion about health funding. Even when the sensitivity to arguments is less important, sizable movement in the distribution of attitudes can still occur. However, when attitudes concerning an issue are not evenly split, the amount of malleability revealed by a single counterargument is not enough to reverse majority opinion. Thus, the high level of agreement with greater health spending among students can not be changed into opposition to such a policy (see Figure 2). Both the positive and the negative arguments have a notable effect on support for increased healthcare funding (7 percentage points each), but they do not overturn majority opinion.

I am not suggesting that waging a campaign based on one of these arguments would have exactly the same impact indicated here by the survey experiments. Many factors need to be taken into account, notably reaching the targets of the message and dealing with the opponents' campaign. Nonetheless, such experiments represent useful tools to identify the opinions that can be swayed and the arguments that are most effective. I now use these data to examine who can be influenced by a single unobtrusive argument to reverse their public policy positions?

Table 3 presents the results of binary logistic regressions, one for each survey. The dependant variable takes the value of 1 if the respondent switched sides (from support for increased spending to opposition, or vice-versa) after hearing a counterargument, and 0 if the initial position remained unchanged.

The first potential determinant, strength of opinion, has a significant negative impact on persuasion in both samples. Consistent with *Hypothesis 1*, people who are certain about their initial opinion concerning increased health funding are much less likely to reverse their opinion after having heard a counterargument than people who are uncertain. Simulations reveal that the probability of switching sides decreases by .17 in the Ontario survey and by .22 in the university survey as the strength of the position moves from its lowest (0, not at all certain) to its highest value (1, very certain).[4]

Ambivalence is a statistically significant correlate of susceptibility to persuasion in both models. In fact, it is the most important correlate in both cases. In line with *Hypothesis 2*, individuals whose considerations pull in opposite directions are much more likely to have been influenced by the counterargument than individuals whose considerations converge toward a single position. Simulations show that moving from one end (0, totally consistent considerations) to the other (1, an equal number of consistent and inconsistent considerations) on the ambivalence scale raises the likelihood of persuasion from .09 to .32 in the RDD sample (difference = .24) and from .02 to .22 in the student sample (difference = .20). These predictions hint that persuasion does not take place without ambivalence, but that persuasion does not

[4] All simulations presented in this paper calculated first differences for a movement of 0 to 1 on a reference variable while holding all other variables unchanged.

necessarily occur when ambivalence is present.

The other potential moderators of attitude change do not represent important explanations of susceptibility to counterarguments. Inconsistency, indifference, issue importance, political information, and risk-aversion are not significantly related to instability of opinion in any of the two surveys. These results disconfirm the hypotheses that there is greater persuasion among people who are predisposed to favour the position that the arguments are pushing, those who hold few reasons to support either position, those who do not care about the issue of health, those who possess little information about politics, and those who accept taking risks with ease. Women are slightly more prone to influence than men, but this difference is only statistically significant in Ontario

Finally, it should be noted that these models as a whole do not accomplish an excellent job of explaining individual susceptibility to political persuasion. The adjusted pseudo R-squared of each model is relatively low.[5] Ambivalence and uncertainty (opinion strength) represent the best predictors of persuasion, but they are insufficient to account for all opinion change. Some ambivalent and uncertain people are not swayed by counterarguments for reasons we have not identified here.

Although they produce different estimates of the distribution of attitudes relating to healthcare spending, student and random samples lead to the same causal inferences. Having demonstrated the validity of university surveys for the study of political persuasion on this policy issue, I now turn to persuasion within an electoral context.

Vote Intentions: Persuasion in the 2003 Québec Election

Table 4 describes the distributions of six electoral attitudes. Although random sample comparison data is not presented here, it is clear that the undergraduate university students do not bear a strong resemblance to a representative sample of Québec citizens. Support for the Parti Québécois is more widespread than the dead heat between the PQ and the PLQ that was exhibited by media polls during the field period of the student survey. In fact, all attitudes related to vote choice are strongly biased in favour of the Parti Québécois. Students score much higher than the population on government satisfaction, evaluation of Bernard Landry, leftist ideological orientation, support for sovereignty, and péquiste partisan identification. These numbers indicate that the PQ was easily cruising toward a third mandate, a suggestion that is clearly off the mark. As was demonstrated in the previous section, valid inferences may nevertheless emerge from data with such biased distributions.

Table 5 shows the impacts of various variables on support for each of the three main political parties. PQ voters think Landry would make the best premier, are satisfied about the

[5] Hagle and Mitchell's correction (1992) of the Aldrich and Nelson pseudo R-squared (1984).

government's performance, identify with the party, and express little political cynicism. Those who intend to vote for the Liberals evaluate Charest positively, favour increased health spending, identify with the PLQ, and do not situate themselves on the left side of the political continuum. Adéquistes supporters believe Dumont represents the best party leader, express dissatisfaction toward the government, and oppose implementation of a rise in health expenditures. Are these findings reasonable? Directly comparable data is not available. The latest examination of the correlates of vote choice in Québec provincial elections dates from the early 1980s (Crête, 1984). At the time, one of today's main political parties, the Action Démocratique, was not even on the radar screen.

Do the counterarguments survey experiments prompt undergraduate students to change their voting preferences? Yes, but vote intentions are less susceptibility to influence than opinions about health funding. Approximately 9% of party supporters wee persuaded to abandon their first choice. This proportion of persuadable subjects is smaller among backers of the Parti Québécois (6%) than among supporters of the Parti Libéral (12%) and the Action Démocratique (14%). These defections lower PQ support by three percentage points (see Figure 3), PLQ support by two percentage points (see Figure 4), and ADQ support by one percentage points (see Figure 5). Obviously, these modifications are not huge. They do not come close to reversing the aggregate party rankings. It should be noted that non-voting is much more vulnerable to persuasion than vote choice. Survey experiments carried out on respondents who initially indicated they would not vote or would cancel heir ballot (not examined here) were able to convert a third of them (32%) into party voters.

Despite the relatively modest proportion of respondents who succumbed to the persuasive attempts on vote intentions, it nevertheless remains interesting to uncover what kind of individuals are these 9%. Table 6 reports the findings of a binary logistic regression of opinion change in response to the counterarguments. Again, ambivalence is significantly linked to persuasive influence. Being torn between two voting preferences is associated with a higher proportion of persuasion. Simulations indicate that the probability of succumbing to the persuasion attempt is .20 higher among respondents who have an equal number of consistent and inconsistent considerations (1 on the indifference scale) than among respondents whose considerations are all compatible with the preference they expressed before the counterargument (0 on the indifference scale).

In contrast to the correlates of change in opinion about healthcare funding, issue importance, political information, and risk-aversion are significant predictors of susceptibility to persuasion on vote intentions. In support of hypotheses 5, 6, and 7, people who are not interested in the election, people who are not informed about politics, and people who easily accept taking risks responded to a greater extent to the counterarguments.

The other potential determinants of persuasion and the sociodemographic control variables are irrelevant. This model performs relatively well in accounting for the variance in the dependent variable, as indicated by the adjusted pseudo R-squared.

Discussions

Ambivalence

Ambivalence and uncertainty are two topics which have received special attention from Alvarez & Brehm (1995, 1997). They define uncertainty as attitudes which exhibit some equivocation, variance, or a lack of conviction. This notion was found to characterize the attitudes of Americans regarding candidates issue positions and racial policies (Alvarez & Franklin, 1994; Alvarez & Brehm, 1997). They distinguish uncertainty from ambivalence which occurs when a person faces a choice between irreconcilable core beliefs. For instance, the decision to support or oppose abortion can be problematic for those who value both women's autonomy and human life before birth (Alvarez & Brehm, 1995). Alvarez & Brehm argue that the opinions of uncertain individuals can be influenced by providing them with relevant information, and that ambivalent individuals can not be swayed with further information (since this extra information will only exacerbate the internal conflict).

Our results do not comply with the latter of these two assertions. We find that citizens who experience ambivalence can be affected by a single argument. How can we account for these discrepancies? They are some clear methodological differences between their studies and the one reported here. Alvarez & Brehm rely on an estimation procedure to identify variability in opinion and the presence of ambivalence and uncertainty. I use direct measures of persuasion, ambivalence and uncertainty. However, we can not be confident that the discrepancies in results solely stem from these contrasts in design.

University Students and Electoral Behaviour

Ambivalence and strength of opinion constitute the two dominant correlates of persuasion on attitudes toward public healthcare spending in the random and non-representative surveys. The story is more complex with vote intentions. Ambivalence is also an important determinant of susceptibility to influence. But three other factors are suddenly pertinent (issue importance, political information, and risk-aversion). Can we trust these latter results?

Validating the university student survey on the issue of health funding does not guarantee that other issues allow for valid inferences. The quality of non-random surveys may hinge on the associations between the characteristics of the non-representative sample and the political behaviour under investigation. Age may not be problematic for opinion about health funding

because age does not have a significant independent impact on that opinion (see the first column of Table 2). In contrast, there is evidence that age (or more precisely generations) remains a key explanatory facet (even after controlling for a multitude of other variables) of voting for the Parti Québécois (Crête, 1984) and of support for Québec sovereignty (Martin, 1994). Consequently, student respondents perhaps cause particular concerns for the study of voting behaviour in Québec. Without conclusive comparative evidence of the type presented here on health, the doubt can not be completely dismissed.

Conclusions

This paper has demonstrated that substantial changes in opinion can be induced by exposing people to a single argument which comes into conflict with their prior issue positions. A notable portion of the public can be persuaded to abandon an opinion expressed seconds earlier and adopt the opposing point of view.

In order to be successful, persuasive attempts do not need to be directed at the entire population. They ought to concentrate their resources on the most vulnerable targets. One type of individual tends to consistently be more susceptible to influence: ambivalent citizens. The opinions of persons who are torn between two conflicting positions are relatively more malleable. There seems to be a portion of the public which, for a particular issue, is sitting on the proverbial fence, leaning toward one side, but open to counterarguments, and ready to reverse their political choice in certain circumstances. But experiencing cross-pressures appears to be a necessary but insufficient condition for political persuasion to occur. It is unclear why some ambivalent citizens change their mind while others do not.

In some particular instances, it is possible to reverse the opinion of persons who do not have much confidence in their opinion, who are less engaged with an issue, who are less informed, and who accept taking risks with a certain ease.

We generally believe that random representative samples are necessary to make valid inferences about the political values, opinions and behaviour of the population. This paper presented evidence that a survey of undergraduate university students yields the same conclusions about the relationships between variables as a random population survey. Such efficient research designs should not be neglected by scholars who have a hard time locating appropriate data. Certainly, further examination of this matter is warranted.

Appendix: Description of Variables and Questions

Persuasion, increasing health funding, Ontario survey (0/1):
Opponents of increased funding were randomly given one of three pro arguments, supporters were randomly given one of three con arguments.
"Government should cover rising healthcare costs by significantly increasing spending. Do you agree strongly, agree somewhat, disagree somewhat, or disagree strongly?"
"I will now read you an argument about this issue."
Pro 1: "Some people say that Medicare is basically sound. Its problems are primarily due to inadequate funding. To reverse recent deterioration we simply need to restore an adequate level of public funding."
Pro 2: "Some people say that we need to face the facts, the system needs more money. We should be willing to pay more taxes to provide good quality, reliable healthcare for all Canadians."
Pro 3: "Some people say that our healthcare system is an essential part of what it means to be Canadian. We must not starve it of the public investment it needs to stop and reverse the deterioration of recent years."
Con 1: "Some people say that we can't afford to keep the current system as it is. Taxes will keep going up and up."
Con 2: "Some people say that it makes no sense to transfer funds from other areas such as education and have healthcare eat up more and more of our budget."
Con 3: "Some people say that the current system provides few incentives to save money. Adding more tax dollars won't solve that. The system will absorb any amount of money put into it."
"This argument may or may not affect your position, but we would like to ask you again, if you strongly agree, somewhat agree, somewhat disagree or strongly disagree that government should cover rising healthcare costs by significantly increasing spending?"
1 = Respondent switched from opposition to support or from support to opposition after hearing the argument; 0 = Otherwise.

Persuasion, increasing health funding, University survey (0/1):
Opponents of increased funding were given one pro argument, supporters were given one con arguments.
"Les gouvernements devraient accroître significativement les dépenses en matière de santé. Êtes-vous tout à fait d'accord, plutôt en accord, plutôt en désaccord, ou tout à fait en désaccord?"
"Je vais maintenant vous présenter un argument au sujet de cet enjeu."
Pro: "Certaines personnes pensent que la détérioration récente du système de santé est seulement due aux coupures des dépenses gouvernementales qui ont eu lieu il y a quelques années lors de la lutte au déficit. Maintenant que les gouvernements ont des surplus, ils devraient réinvestir en santé. "
Con: "Certaines personnes pensent que le système de santé est un trou sans fond: tout argent qu'on y dépense est englouti. Si on investit davantage en santé, nos impôts devront augmenter ou on devra retirer de l'argent destiné à d'autres programmes importants comme l'éducation."
"Cet argument pourrait avoir influencé ou ne pas avoir influencé votre opinion."
"J'aimerais vous demandez encore une fois, êtes-vous tout à fait d'accord, plutôt en accord, plutôt en désaccord, ou tout à fait en désaccord que les gouvernements devraient accroître significativement les dépenses en matière de santé?"
1 = Respondent switched from opposition to support or from support to opposition after hearing the argument; 0 = Otherwise.

Persuasion, provincial vote intentions, University survey (0/1):
Each party supporter was given an argument against his initial preference.
"S'il y avait des élections provinciales demain, pourriez-vous me dire pour quel parti politique vous auriez l'intention de voter?"
"Je vais maintenant vous présenter un argument à ce sujet.
PQ con argument: "Certaines personnes pensent que ça fait assez longtemps que le Parti Québécois est au pouvoir. C'est un vieux parti fatigué qui ne présente plus aucune nouvelle idée. Son chef est arrogant, méprisant et déconnecté de la population."
PLQ con argument: "Certaines personnes pensent que le Parti Libéral n'est qu'une coquille vide qui cherche seulement à gagner le pouvoir. Il est l'outil des grandes entreprises et veut favoriser les plus riches de notre société. Son chef est prêt à promettre n'importe quoi pour se faire élire."
ADQ con argument: "Certaines personnes pensent que l'Action Démocratique est un parti extrémiste qui ferait reculer le Québec avec son agenda de droite. Il présente une équipe inexpérimentée et incompétente. Son chef a des idées simplistes qu'il modifie constamment."
"Cet argument pourrait avoir influencé ou ne pas avoir influencé votre opinion."
"J'aimerais vous demandez encore une fois, s'il y avait des élections provinciales demain, pour quel parti politique auriez-vous l'intention de voter?"
1 = Changed party preference by switching to another party or to non-voting after hearing argument; 0 = Otherwise.

Issue importance (0-1):
Increased health funding: health issue salience index (open-ended and close-ended questions), standardized.
Ontario survey*:*
"What is the most important issue in Ontario to-day, in other words, the one that concerns you personally the most?"
"Overall, is the state of healthcare in Canada Very important, Somewhat important, Not very important, or Not at all important to you personally?"
University survey:
"What is the most important issue in Ontario to-day, in other words, the one that concerns you personally the most?"
"Overall, is the state of healthcare in Canada Very important, Somewhat important, Not very important, or Not at all important to you personally?"
0 = Low salience on both questions; (...) 1 = High salience on both questions.
Vote intentions: interest in the election, standardized.
"Sur une échelle similaire, quel est votre intérêt pour la prochaine élection québécoise? Utilisez une échelle de 1 à 10 où 1 veut dire aucun intérêt et 10 veut dire beaucoup d'intérêt."
0 = Low interest in the election; (...) 1 = High interest in the election.

Strength of opinion (0-1):
Certainty about the initial positions before exposition to arguments.
Ontario survey: "And, how certain are you about your position? Are you Very certain, Somewhat certain, Not very certain, Not at all certain?"
0 = Not certain at all; .33 = Not very certain; .67 = Somewhat certain; 1 = Very certain.
University survey : "Est-ce que ce choix est très certain, assez certain, assez incertain ou très incertain?"
0 = Très incertain; .33 = Assez incertain; .67 = Assez certain; 1 = Très certain.

Ambivalence (0-1):
Difference between the proportion of inconsistent considerations (those that are not compatible with the initial issue position) and the proportion of consistent considerations (those that are congruent with the initial issue position), standardized. All positive differences were collapsed to 1.
Health funding considerations, Ontario and University surveys:
"If we want to improve healthcare, we don't need to spend more money, we need to use the money we do spend better."
"The current level of funding is inadequate to maintain the current standards of healthcare."
"We must protect our current Medicare system even if it means taxes have to go up."
"Public expectations of the healthcare system are far too high and cannot be met without bankrupting the system."
"Are the problems with the healthcare system the result of poor management or of lack of money?"
Parti Québécois vote intention considerations, University survey:
"À votre avis, lequel des chefs de parti suivants ferait le meilleur premier ministre: Jean Charest, Mario Dumont ou Bernard Landry ?"
"Diriez-vous que vous êtes très satisfait(e), plutôt satisfait(e), plutôt insatisfait(e) ou très insatisfait(e) de l'actuel gouvernement du Québec?"
"Généralement parlant, en politique provinciale, vous considérez-vous habituellement péquiste, libéral(e), adéquiste, ou considérez-vous habituellement que vous n'avez pas d'attachement pour un parti?"
Political cynicism scale: "Je ne crois pas que le gouvernement se soucie beaucoup de ce que les gens comme moi pensent."; "Les politiciens ne s'intéressent aux citoyens qu'au moment des élections."; "Au gouvernement, ce ne sont pas les politiciens qui détiennent le vrai pouvoir."; "À part sur la souveraineté, les partis politiques au Québec ont les mêmes positions."
0 = Only consistent considerations; (...) 1 = Equal number of consistent and inconsistent considerations.
Parti Libéral du Québec vote intention considerations, University survey:
"À votre avis, lequel des chefs de parti suivants ferait le meilleur premier ministre: Jean Charest, Mario Dumont ou Bernard Landry ?"
"Et vous personnellement? Diriez-vous que vous êtes à gauche, à droite, au centre, ou n'êtes-vous pas sûr(e)?"
"Les gouvernements devraient accroître significativement les dépenses en matière de santé. Êtes-vous tout à fait d'accord, plutôt en accord, plutôt en désaccord, ou tout à fait en désaccord?"
"Généralement parlant, en politique provinciale, vous considérez-vous habituellement péquiste, libéral(e), adéquiste, ou considérez-vous habituellement que vous n'avez pas d'attachement pour un parti?"
Action Démocratique du Québec vote intention considerations, University survey:
"À votre avis, lequel des chefs de parti suivants ferait le meilleur premier ministre: Jean Charest, Mario Dumont ou Bernard Landry ?"

"Diriez-vous que vous êtes très satisfait(e), plutôt satisfait(e), plutôt insatisfait(e) ou très insatisfait(e) de l'actuel gouvernement du Québec?"
"Les gouvernements devraient accroître significativement les dépenses en matière de santé. Êtes-vous tout à fait d'accord, plutôt en accord, plutôt en désaccord, ou tout à fait en désaccord?"
Political cynicism scale: "Je ne crois pas que le gouvernement se soucie beaucoup de ce que les gens comme moi pensent."; "Les politiciens ne s'intéressent aux citoyens qu'au moment des élections."; "Au gouvernement, ce ne sont pas les politiciens qui détiennent le vrai pouvoir."; "À part sur la souveraineté, les partis politiques au Québec ont les mêmes positions."
0 = Only consistent considerations; (...) 1 = Equal number of consistent and inconsistent considerations.

Inconsistency (0-1):
Difference between the proportion of inconsistent considerations (those that are not compatible with the initial issue position) and the proportion of consistent considerations (those that are congruent with the initial issue position), standardized. All negative differences were collapsed to 0. Considerations: same as ambivalence.
0 = Number of consistent considerations equal or greater than the number of inconsistent considerations; (...) 1 = Only inconsistent considerations.

Indifference (0-1):
Proportion of neutral considerations (don't know or moderate), standardized. Considerations: same as ambivalence.
0 = No discrete / moderate considerations; (...) 1 = Only discrete / moderate considerations.

Political information (0-1):
Four-item index of general factual knowledge about politics, standardized.
Ontario survey:
"Do you recall the name of the Premier of Ontario?"
"Do you recall the name of the leader of the provincial Liberal Party?"
"Do you recall the name of the leader of the provincial New Democratic Party?"
"Do you recall the name of the commissioner of the Commission on the Future of Healthcare in Canada?"
University survey:
"Pouvez-vous me dire quel est le nom du ministre de l'environnement du Québec?"
"Pouvez-vous me dire quel est le nom du premier ministre de l'Ontario?"
"Pouvez-vous me dire quel est le nom du premier ministre du Canada au moment de la signature de l'accord de libre-échange avec les États-Unis?"
"Pouvez-vous me dire quelle est la capitale de la Californie?"
0 = Incorrect answers to all four questions; (...) 1 = Correct answers to all four questions.

Risk-aversion (0-1):
Difficulty in accepting to take risks, standardized.
"In general, how easy or difficult is it for you to accept taking risks? Is it very easy, somewhat easy, somewhat difficult, or very difficult?"
0 = Very easy; .33 = Somewhat easy; .5 = It depends on the situation; .67 = Somewhat difficult; 1 = Very difficult.

Education (0-1)
Highest level of education completed, standardized.

Age (0-1):
Age in categories, standardized.

Woman (0/1):
Dummy variable which takes the value of 1 if respondent is female.

Income (0-1):
Total household income, standardized.

References

Alvarez R. Michael, and Charles Franklin. 1994. "Uncertainty and Political Perceptions", *Journal of Politics*, 56: 671-689.

Alvarez, R. Michael, and John Brehm. 1995. "American Ambivalence Towards Abortion Policy: Development of a Heteroskedastic Probit Model of Competing Values", *American Journal of Political Science*, 39: 1055-1082.

Alvarez, R. Michael, and John Brehm. 1997. "Are Americans Ambivalent Towards Racial Policies?", *American Journal of Political Science*, 40: 345-374.

Berelson, Bernard R., Paul F. Lazarsfeld, and William N. McPhee. 1954. *Voting: A Study of Opinion Formation in a Presidential Campaign*, Chicago: University of Chicago Press.

Berkowitz, Leonard, and Edward Donnerstein. 1982. "External Validity is More Than Skin Deep", *American Psychologist,* 37: 245-257.

Brian H. Bornstein. 1999. "The Ecological Validity of Jury Simulations: is the Jury Still Out?", *Law and Human Behaviour,* 23: 75-91.

Campbell, Angus, Philip E. Converse, Warren E. Miller, and Donald E. Stokes. 1960. *The American Voter*, New York: Wiley.

Cobb, Michael, and James Kuklinski. 1997. "Changing Minds: Political Arguments and Political Persuasion", *American Journal of Political Science*, 41: 88-121.

Crête, Jean. 1984. *Le comportement electoral au Québec*, Chicoutimi: Gaétan Morin.

Delli Carpini, Michael X., and Scott Keeter. 1993. "Measuring Political Knowledge: Putting First Things First", *American Journal of Political Science*, 37: 1179-1206.

Eagly, A., and S. Chaiken. 1975. "An Attribution Analysis of the Effect of Communicator Characteristics on Opinion Change: The Case of Communicator Attractiveness", *Journal of Personality and Social Psychology*, 32: 136-144.

Festinger, Leon. 1957. *A Theory of Cognitive Dissonance*, Stanford: Stanford University Press.

Fishbein, Martin. 1967. *Readings in Attitude Theory and Measurement*, New York: Wiley.

Fishbein, Martin, and Icek Ajzen. 1975. *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*, Reading: Addison-Wesley.

Fiske, Susan, Richard Lau, and Richard Smith. 1990. "On the Varieties and Utilities of Political Expertise", *Social Cognition*, 8: 31-48.

Fournier, Patrick. 2000. "Heterogeneity in Political Decision-Making: The Nature, Sources, Extent, Dynamics, and Consequences of Interpersonal Differences in Coefficient Strength", Unpublished Doctoral Dissertation, University of British Columbia.

Fournier, Patrick, André Blais, Richard Nadeau, Elisabeth Gidengil, and Neil Nevitte. 2003. "Issue Importance and Performance Voting", *Political Behavior*, 25: 51-67.

Guge, Michael, and Michael Meffert. 1998. "The Political Consequences of Attitudinal Ambivalence", Paper presented at the Annual Meeting of the Midwest Political Science Association, Chicago.

Holbrook, Allyson L., Alison Pfent & Jon A. Krosnick. 2003. "Response Rates in Recent Surveys Conducted by Non-Profits and Commercial Survey Agencies and the News Media", Paper Presented at the Annual Meeting of the American Association for Public Opinion Research, Nashville.

Hovland, Carl, Irving Janis and Howard Kelly. 1953. *Communication and Persuasion*, New Haven: Yale University Press.

Iyengar, Shanto, and Donald R. Kinder. 1987. *News that Matters*, Chicago: The University of Chicago Press.

Iyengar, Shanto, Mark Peters, and Donald R. Kinder. 1982. "Experimental Demonstration of the Not-so-minimal Consequences of Television News Programs", *American Political Science Review*, 76: 848-858.

Jacoby, William. 1991. "Ideological Identification and Ideological Issue Attitudes", *American Journal of Political Science*, 35: 178-205.

Janis, Irving, and Carl Hovland. 1959. *Personality and Persuasibility*, New Haven: Yale University Press.

Judd, Charles, and James W. Downing. 1990. "Political Expertise and Development of Attitude Consistency", *Social Cognition*, 8: 104-124.

Judd, Charles, and Jon A. Krosnick. 1989. "The Structural Bases of Consistency Among Political Attitudes: Effects of Political Expertise and Attitude Importance", In A. Pratkanis, S. Beckler, and A. Greenwald (eds), *Attitude Structure and Function*, Hillsdale: Lawrence Erlbaum Associates.

Katz, Elihu, and Paul Lazarsfeld. 1955. *Personal Influence: The Part Played by People in the Flow of Mass Communications*, New York: Free Press.

Kinder, Donald R., and Lynn M. Sanders. 1990. "Mimicking Political Debate with Survey Questions: The Case of Opinion on Affirmative Action for Blacks", *Social Cognition*, 8: 73-103.

Kinder, Donald, and Thomas Palfrey. 1993. *Experimental Foundations of Political Science*, Ann Arbor: University of Michigan Press.

Koch, Jeffrey. 1998. "Political Rhetoric and Political Persuasion: The Changing Structure of Citizens' Preferences on Health Insurance During Policy Debate", *Public Opinion Quarterly*, 62: 209-229.

Krosnick, Jon A. (1988). The Role of Attitude Importance in Social Evaluation: A Study of Policy Preferences, Presidential Candidate Evaluation, and Voting Behavior. *Journal of Personality and Social Psychology* 55: 196-210.

Krosnick, Jon A. (1990). Government Policy and Citizen Passion: A Study of Issue Publics in Contemporary America. *Political Behavior* 12: 59-92.

Krosnick, Jon A., and Laura A. Brannon, 1993. "The Impact of the Gulf War on the Ingredients of Presidential Evaluations: Multidimensional Effects of Political Involvement", *American Political Science Review*, 87: 963-975.

Krosnick, Jon A., and Donald R. Kinder. 1990. "Altering the Foundations of Popular Support for the President through Priming", *American Political Science Review*, 84: 497-512.

Lazarsfeld, Paul F., Bernard R. Berelson, and Hazel Gaudet. 1944. *The People's Choice*, New York: Duell, Sloane, and Pierce.

Lodge, Milton, Kathleen M. McGraw, and Patrick Stroh. 1989. "An Impression-driven Model of Candidate Evaluation", *American Political Science Review*, 83: 399-419.

Luskin, Robert C. 1990. "Explaining Political Sophistication", *Political Behavior*, 12:331-361.

Luskin, Robert C., and Joseph C. Ten Barge. 1995. "Education, Intelligence, and Political Sophistication", Paper presented at the Annual Meeting of the Midwest Political Science Association, Chicago.

Martin, Pierre. 1994. "Générations politiques, rationalité économique et appui à la souveraineté du Québec", *Revue Canadienne de Science Politique*, 27: 345-59.

Miller, Joanne M., and Jon A. Krosnick. 1996. "News Media Impact on the Ingredients of Presidential Evaluations: A Program of Research on the Priming Hypothesis", in D.C. Mutz, P.M. Sniderman, and R.A. Brody (eds), *Political Persuasion and Attitude Change*, Ann Arbor: The University of Michigan Press.

McGraw, Kathleen M., Milton Lodge, and Patrick Stroh. 1990. "On-line Processing in Candidate Evaluation: The Effects of Issue Order, Issue Importance, and Sophistication", *Political Behavior*, 12: 41-58.

McGraw, Kathleen M., and Neil Pinney. 1990. "The Effects of General and Domain Specific Expertise on Political Memory and Judgment", *Social Cognition*, 8: 9-30.

McGraw, Kathleen M., and Marco Steenbergen. 1995. "Pictures in the Head: Memory Representation of Political Candidates", In Milton Lodge and Kathleen McGraw (eds), *Political Judgment: Structure and Process*, Ann Arbor: The University of Michigan Press, 15-41.

Mutz, Diana, Paul Sniderman, and Richard Brody. 1996. *Political Persuasion and Attitude Change*, Ann Arbor: The University of Michigan Press.

Nadeau, Richard, and Christopher J. Fleury. 1994. "Cross-Pressured Nationalists and the Sovereignty Decision: Evidence from the Quebec Case", Paper presented at the Annual Meeting of the American Political Science Association, New York.

Nadeau, Richard, Pierre Martin, and André Blais. 1999. "Attitudes toward Risk-Taking and Modes of Political Choice in the Quebec Referendum on Sovereignty", *British Journal of Political Science*, 29.

O'Keefe, Daniel. 1990. *Persuasion: Theory and Research*, Newbury Park: Sage.

Petty, Richard, and John Cacioppo. 1986. *Communication and Persuasion: Central and Peripheral Routes to Attitude Change*, New York: Springer-Verlag.

Putnam, Robert D. and Steven Yonish. N.a. "How Important is Response Rate? An Evaluation of a 'Mail Panel' Survey Archive", Unpublished manuscript.

Sears, David O. 1986. "College Sophomores in the Laboratory: Influences of a Narrow Data Base on Social Psychology's View of Human Nature", *Journal of Personality and Social Psychology,* 51: 515-30.

Sherif, Carolyn, Muzafer Sherif and Roger Nebergall. 1965. *Attitude and Attitude change: The Social Judgement-Involvement Approach*, Philadelphia: Saunders.

Simons, Herbert W. 1976. *Persuasion: Understanding, Practice, and Analysis*, Reading: Addison-Wesley.

Sniderman, Paul M. 1993. "The New Look in Public Opinion", in A.W. Finifter, *Political Science: State of the Discipline*, Washington: American Political Science Association.

Sniderman, Paul M., Richard A. Brody, and Philip E. Tetlock. 1991. *Reasoning and Choice: Explorations in Political Psychology*, Cambridge: Cambridge University Press.

Stimson, James A. 1975. "Belief Systems, Constraint and the 1972 Election", *American Journal of Political Science*, 19: 393-417.

Ward, Edward A. 1993. "Generalizability of Psychological Research From Undergraduates to Employed Adults", *The Journal of Social Psychology,* 133: 513-519.

Zaller, John R. 1990. "Political Awareness, Elite Opinion Leadership, and the Mass Survey Response", *Social Cognition*, 8: 125-153.

Zaller, John R. 1992. *The Nature and Origins of Mass Opinion*, Cambridge: Cambridge University Press.

Zaller, John R., and Stanley Feldman. 1992. "A Simple Theory of the Survey Response: Answering Questions versus Revealing Preferences", *American Journal of Political Science*, 36: 579-616.

Table 1. The Distribution of Attitudes about Health Funding (% Agree)

	Provincial Random Sample	University Student Sample	Difference (T-test)
Government should cover rising healthcare costs by significantly increasing spending.	57	72	15 ***
The overall quality of healthcare available in my community is good/excellent.	39	34	-5
The problems with the healthcare system are the result of lack of money.	67	77	10 ***
If we want to improve healthcare, we don't need to spend more money, we need to use the money we do spend better.	79	58	-21 ***
A big problem in our healthcare system is people using healthcare services when they don't really need to.	78	61	-17 ***
The current level of funding is inadequate to maintain the current standards of healthcare.	77	70	-7 **
We must protect our current Medicare system even if it means taxes have to go up.	70	72	2
Public expectations of the healthcare system are far too high and cannot be met without bankrupting the system.	43	51	8 **
Governments shouldn't pay for healthcare for all people as they do now, just for lower income people.	17	16	-1
Number of cases (average)	640	302	

Statistical significance (two-tailed): * < .1; ** < .05; *** < .01

Table 2. The Correlates of Increasing Health Funding (OLS Regressions)

EXPLANATORY VARIABLES	Provincial Random Sample	University Student Sample
Overall quality of healthcare (0-1)	-.10 (.06) *	-.19 (.07) ***
Problems stem from lack of money (0-1)	.13 (.03) ***	.20 (.05) ***
Spend better not more (0-1)	-.14 (.05) ***	-.12 (.05) **
Problems stem from system abusers (0-1)	-.04 (.04)	.01 (.04)
Funding is inadequate (0-1)	.20 (.05) ***	.20 (.05) ***
Protect system even if taxes go up (0-1)	.12 (.04) ***	.19 (.05) ***
Public expectations are too high (0-1)	-.06 (.04)	-.15 (.05) ***
Gov. should only pay for less wealthy (0-1)	.05 (.04)	.07 (.05)
Education (0-1)	-.08 (.05) *	-
Age (0-1)	.04 (.04)	-
Woman (0/1)	-.02 (.03)	-.00 (.03)
Income (0-1)	-.03 (.04)	-
Constant	.52 (.08)	.50 (.08)
Adjusted R-squared	.19	.29
Number of cases	488	287

Statistical significance (two-tailed): * < .1; ** < .05; *** < .01

Figure 1. Persuasion Induced by Survey Experiments

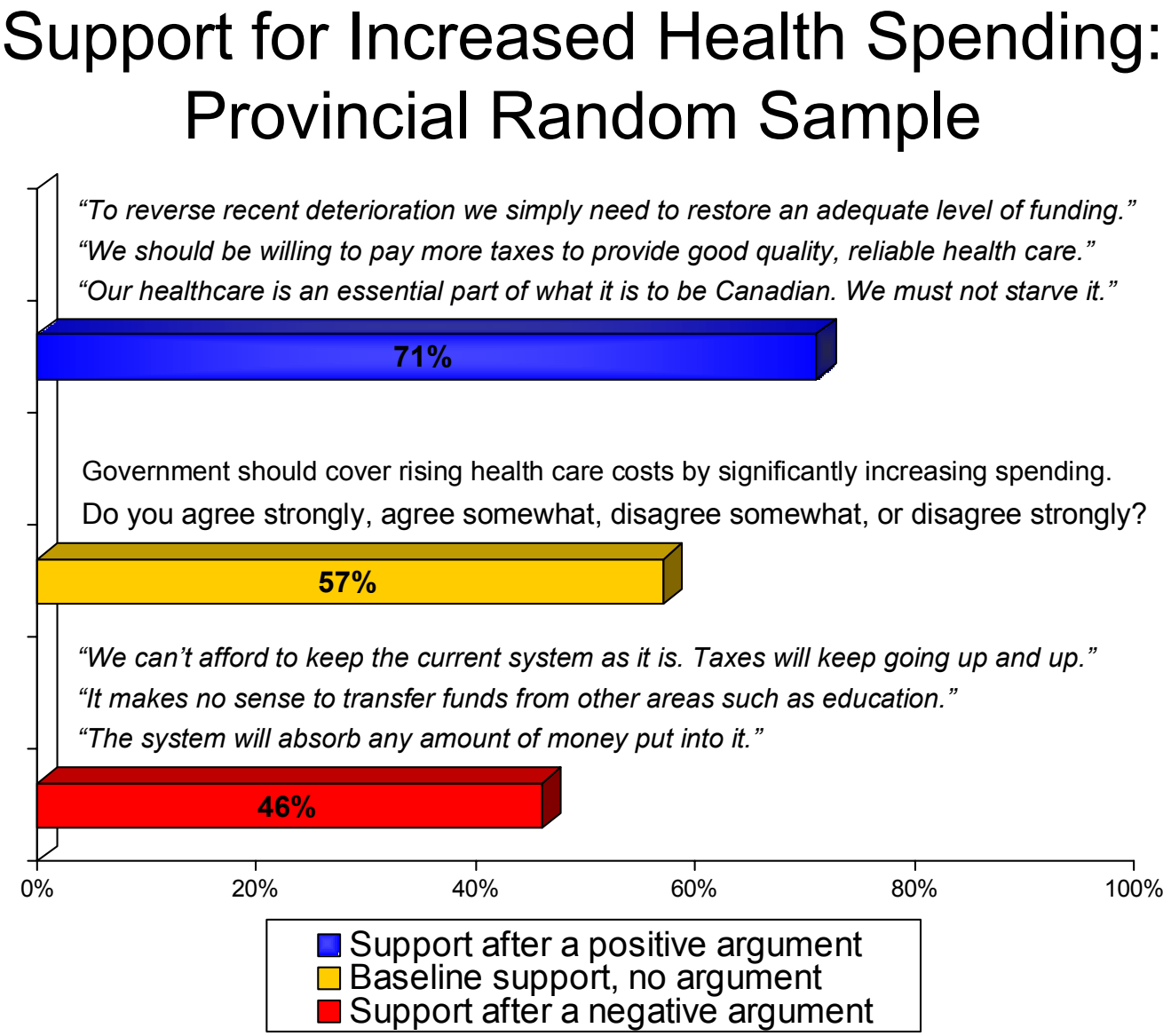

Figure 2. Persuasion Induced by Survey Experiments

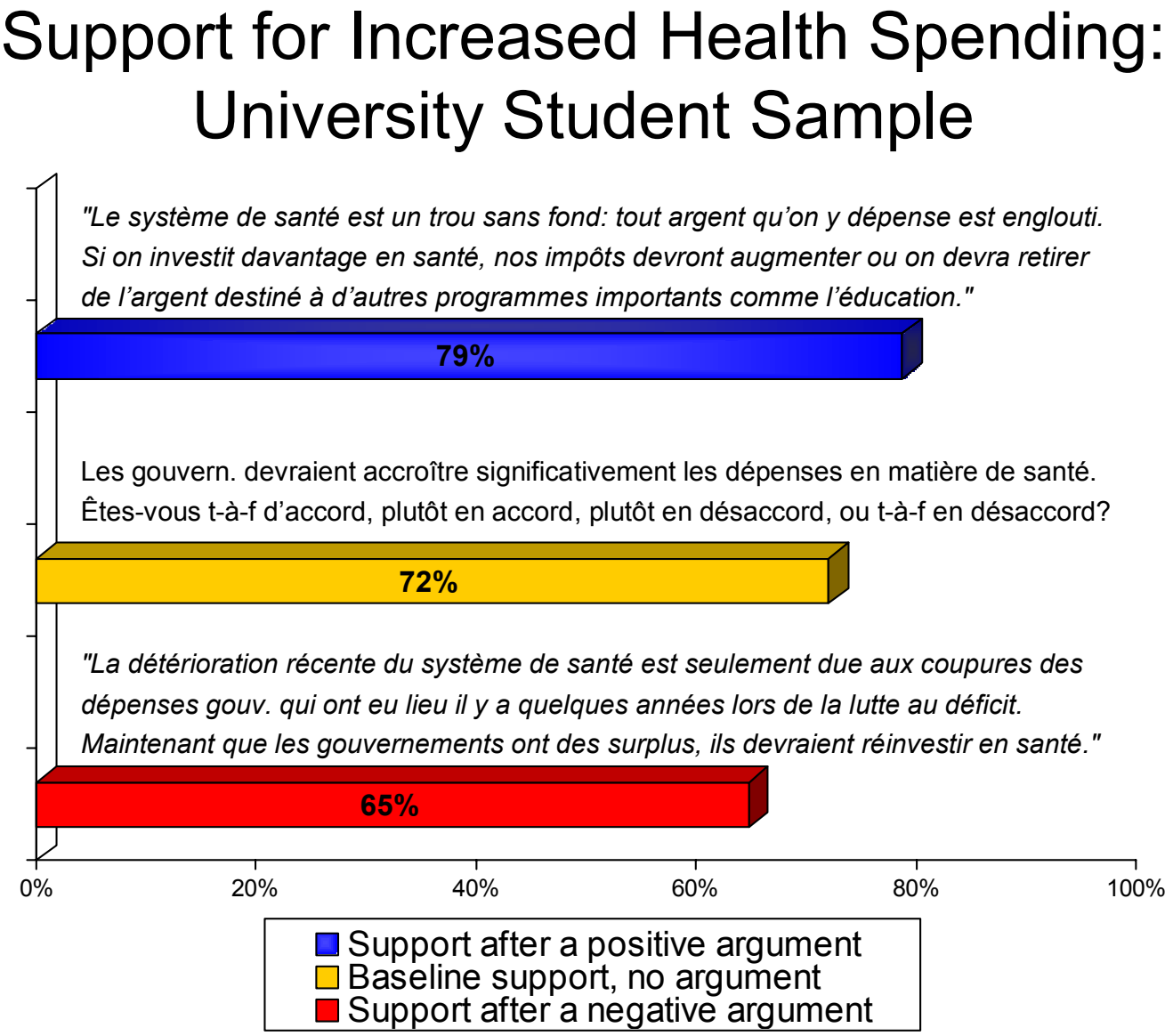

Table 3. The Individual Determinants of Persuasion on Health Funding (Logist. Regress.)

EXPLANATORY VARIABLES	Provincial Random Sample	University Student Sample
Strength of opinion (0/1) ("How certain are you?")	-.89 (.38) **	-1.40 (.48) ***
Ambivalence (0-1) (Similar number of consistent and inconsistent considerations)	1.65 (.48) ***	2.71 (1.27) **
Inconsistency (0-1) (Mostly inconsistent considerations)	.30 (.54)	.14 (1.96)
Indifference (0-1) (Proportion of neutral considerations)	.00 (.45)	-1.10 (.89)
Issue importance (0-1) (Salience of heath)	.07 (.46)	-.75 (.88)
Political information (0-1) (General factual knowledge)	.25 (.38)	-.12 (.69)
Risk aversion (0-1) (Difficulty in accepting to take risks)	-.60 (.44)	-.75 (.82)
Education (0-1)	.73 (.45)	-
Age (0-1)	-.12 (.36)	-
Woman (0/1)	.42 (.24) *	.60 (.47)
Income (0-1)	.08 (.33)	-
Constant	-2.08 (.68)	-1.68 (1.25)
Adjusted pseudo R-squared	.14	.15
Percent correctly predicted	76.6	84.6
Number of cases	466	254

Statistical significance (two-tailed): * < .1; ** < .05; *** < .01

Table 4. The Distribution of Attitudes about Quebec Provincial Vote Intentions (% Agree)

		Vote Attitudes
Vote intentions:	Parti Québécois	46
	Parti Libéral du Québec	19
	Action Démocratique du Québec	7
	Other party	15
	Would not vote / cancel vote	13
Government satisfaction:	Very satisfied	7
	Somewhat satisfied	62
	Somewhat dissatisfied	25
	Very dissatisfied	7
Best Premier:	Bernard Landry	67
	Jean Charest	23
	Mario Dumont	10
Ideological orientation:	Left	36
	Centre	39
	Right	10
	Not sure	15
Support for sovereignty:	Favourable	49
	Unfavourable	40
	Would not vote / cancel vote	11
Partisan identification:	Parti Québécois	39
	Parti Libéral du Québec	17
	Action Démocratique du Québec	2
	No attachment	43
Number of cases (average)		302

Statistical significance (two-tailed): * < .1; ** < .05; *** < .01

Table 5. The Correlates of Quebec Provincial Vote Intentions (Logistic Regressions)

EXPLANATORY VARIABLES		Parti Québécois	Parti Libéral	Action Démocr.
Best Premier:	Landry (0/1)	2.27 (.54) ***	-	-
	Charest (0/1)	-	2.29 (.64) ***	-
	Dumont (0/1)	-	-	4.21 (1.15) ***
Government satisfaction (0-1)		2.36 (1.11) **	-.31 (1.31)	-3.02 (1.79) *
Retrospective economic judgment (0-1)		-.15 (.54)	-.15 (.79)	-.14 (1.27)
Prospective economic judgment (0-1)		.19 (.58)	.33 (.87)	2.24 (1.83)
Increased health funding (0-1)		.21 (.68)	2.27 (1.13) **	-3.73 (2.13) *
Greater private role in health (0-1)		.15 (.62)	-.55 (.92)	.36 (1.57)
Ideological position:	Left (0/1)	-.19 (.42)	-2.21 (.82) ***	-8.22 (39.37)
	Right (0/1)	.15 (.69)	.24 (.88)	-1.72 (1.47)
Party identification:	PQ (0/1)	1.79 (.42) ***	-	-
	PLQ (0/1)	-	2.85 (.65) ***	-
	ADQ (0/1)	-	-	-.56 (1.85)
Support for Quebec sovereignty (0-1)		.62 (.43)	-.80 (.64)	-.05 (.93)
Political cynicism (0-1)		-2.22 (1.06) **	.64 (1.56)	4.84 (3.41)
Woman (0/1)		.72 (.41) *	-.46 (.57)	2.86 (1.61) *
Non-francophone (0-1)		-.77 (.75)	-.30 (.75)	-.28 (1.07)
Age: Over 25 years old (0/1)		-.11 (.62)	.34 (.76)	1.97 (1.14) *
Constant		-3.48 (1.28)	-3.45 (1.74)	-6.91 (3.83)
Adjusted pseudo R-squared		.62	.68	.61
Percent correctly predicted		81.4	91.1	96.0
Number of cases		247	247	247

Statistical significance (two-tailed): * < .1; ** < .05; *** < .01

Figure 3. Persuasion Induced by Survey Experiments

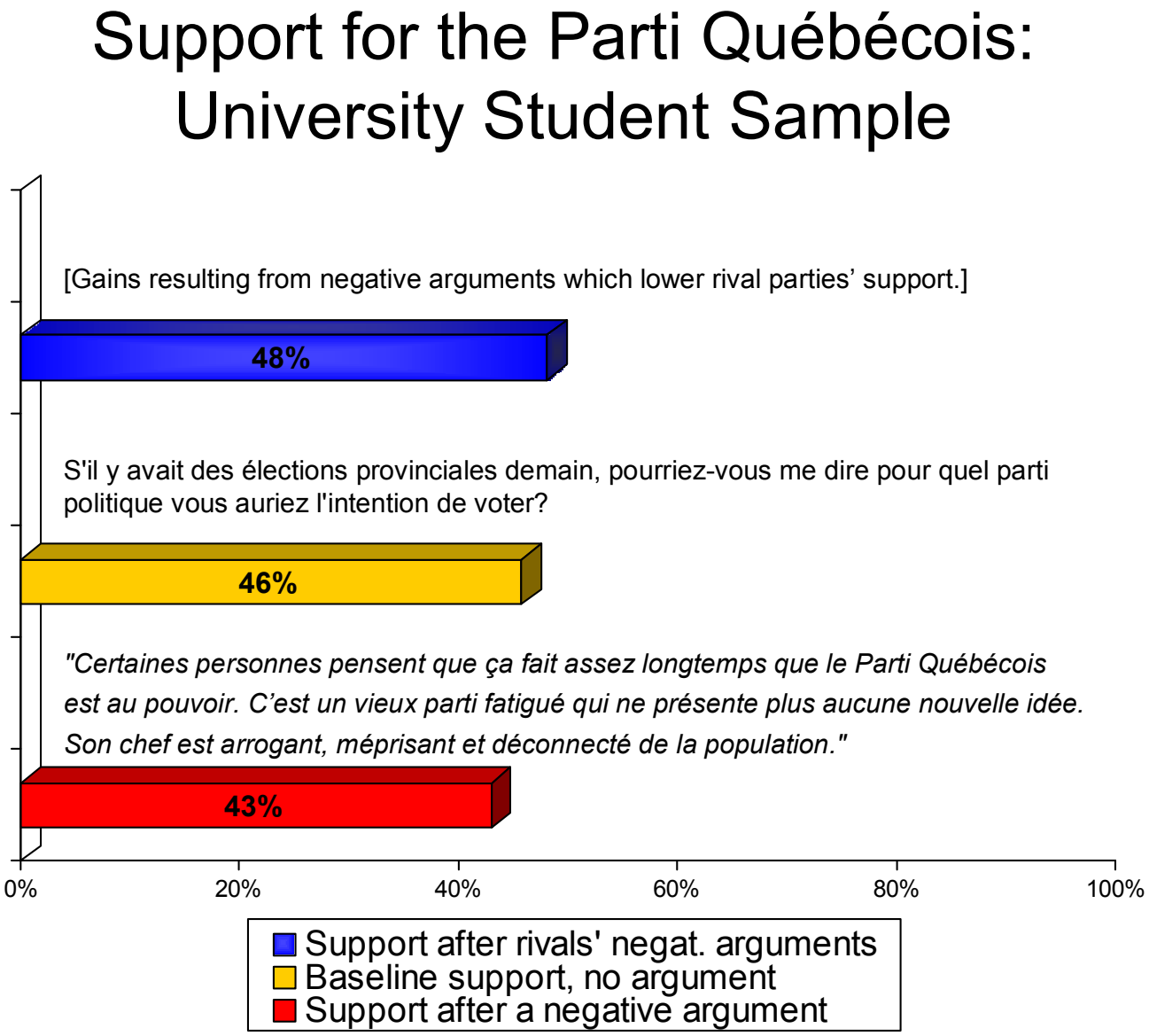

Figure 4. Persuasion Induced by Survey Experiments

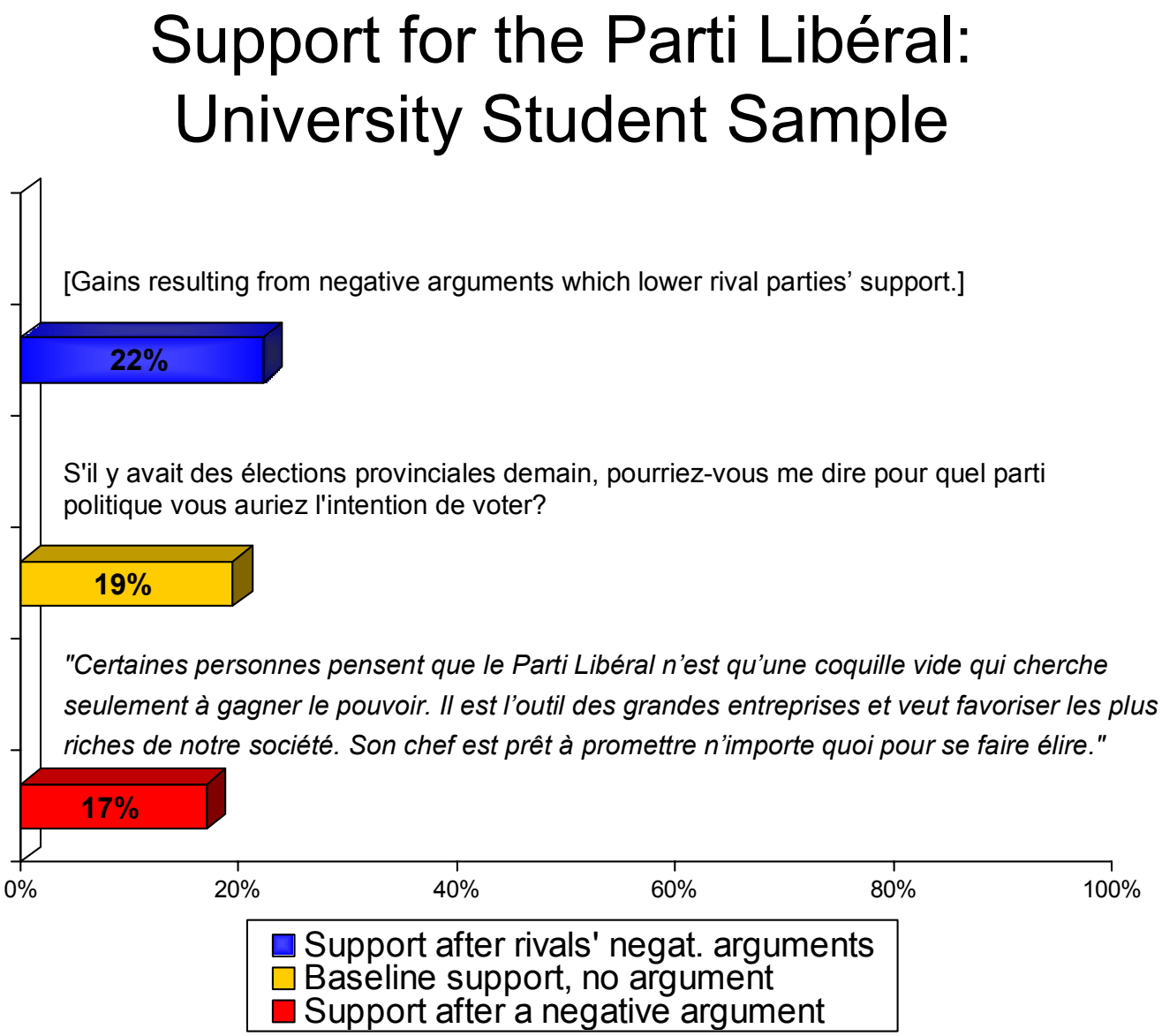

Figure 5. Persuasion Induced by Survey Experiments

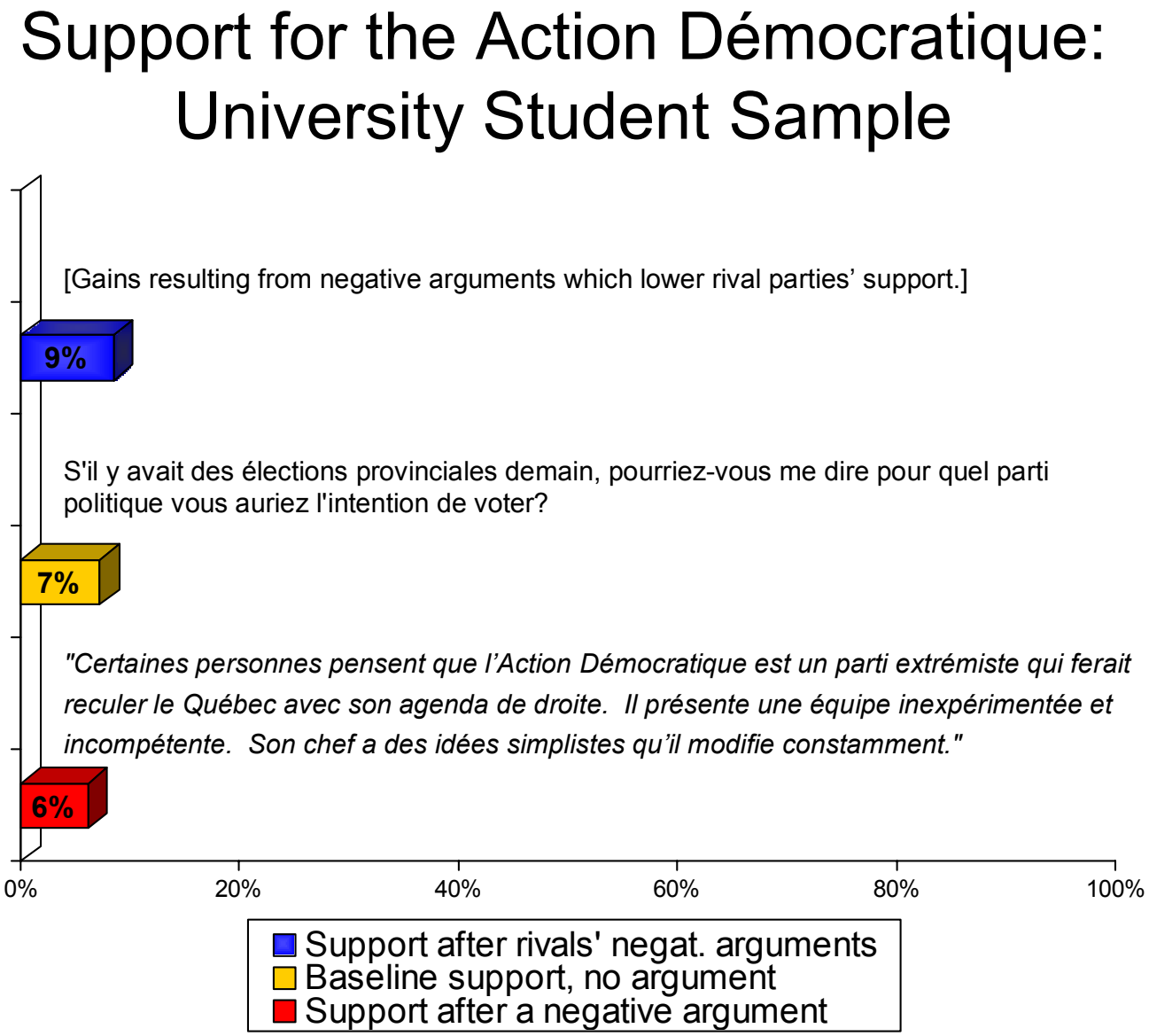

Table 6. The Individual Determinants of Persuasion on Vote Intentions (Logistic Regress.)

EXPLANATORY VARIABLES	Persuasion on Vote Intentions
Strength of opinion (0/1) ("How certain are you?")	1.28 (1.08)
Ambivalence (0-1) (Similar number of consistent and inconsistent considerations)	3.99 (1.56) **
Inconsistency (0-1) (Mostly inconsistent considerations)	-2.87 (2.63)
Indifference (0-1) (Proportion of neutral considerations)	-1.26 (1.18)
Issue importance (0-1) (Interest in the election)	-2.07 (1.15) *
Political information (0-1) (General factual knowledge)	-5.69 (1.86) ***
Risk aversion (0-1) (Difficulty in accepting to take risks)	-2.77 (1.34) **
Woman (0/1)	-.95 (.76)
Non-francophone (0-1)	.72 (1.01)
Age: Over 25 (0/1)	-1.21 (1.22)
Constant	-.50 (1.70)
Adjusted pseudo R-squared	.45
Percent correctly predicted	91.7
Number of cases	180

Statistical significance (two-tailed): * < .1; ** < .05; *** < .01