

Political Knowledge Datasets From Uncritical Use to Self Reflective Creation

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Introduction

Comparing Datasets on Political Knowledge is not simple: there are few, heterogeneous, composed of a limited number of cases (a small-*N*), and they all assume that knowledge is a static accumulated capital. Bringing a dynamic perspective into survey methodology, and calling on cognitive sciences to enrich the concept is profitable on various grounds: knowledge is eventually conceived as embedded in political judgement, and this theoretical shift in turn generates a greater number of observations on a greater number of cases. These benefits have a counterpart: most datasets on PK do not meet these standards. Actually, since they are strictly limited to one aspect of knowledge among others – “civic”, as in the US and in the Netherlands; “awareness”, as in Switzerland – no effort is made to frame them in a comparative perspective. In the long run, collecting data on PK should be done reflectively to allow comparison, even when such datasets are designed to reach more complex goals than usual, as advocated in this paper.

Existing datasets focused on the study of sophistication or including some questions on knowledge are rare. Furthermore, they vary in size, in purpose, in country of origin, in questions wording and order. They also differ longitudinally: some questions are periodically repeated whereas others are single shots attempts to capture the effect of knowledge on selected attitudes in a particular context. Finally, such datasets are produced with different methodological tools – quotas, probabilistic or random routes systems of polling, not to speak of interviews protocols, i.e., mailing, Internet driven, face-to-face, in class, or CATI surveys. As a consequence of such heterogeneity it is difficult to compare findings on the effect of knowledge on behaviour cross-nationally.

In recent years, European and American scholars reassessed the usefulness, reliability, relevance, and robustness of such questionnaires. They convincingly showed that the methodology selected impacted on the quality of the data collected, hence on the reliability of the findings. We have now reached a tipping point where the very utility of studying this issue is debated. What is “political knowledge”, and to what extent is it worth collecting data in this field? In mainstream political science it is usually considered as a *stock* of accumulated *civic* information about institutions and procedures that may be measured by Quiz questions on *national* politics. Considerations about the production of an opinion following on the reception of new information, as well as conversion of attitudes into behaviour are sparse. Moreover, in most surveys non-national issues are simply ignored. To avoid such flaws, a new strategy is needed. Instead of just polling a domestic *electorate* and assessing its level of *sophistication* (Delli Carpini & Keeter, 1993, for a full review of what can be expected from this technique; and Luskin, 1987 & 1990, for an authoritative discussion of the concept), this paper opts for a new strategy. Firstly, it strongly recommends to move from a static to a *dynamic* conception of political knowledge, and review the whole process starting from the reception of new *information* to a possible *involvement* as if it were a continuum, and this without consideration for the level of citizens’ competence since amateurs do have knowledge, if not to the same extent and exactitude than experts. Secondly, it urges scholars to design questionnaires that may travel *from country to country*, beyond linguistic, historical, cultural, and institutional contexts. These two methodological shifts are both required to constitute large homogeneous datasets (i.e., with more than 5000 interviews) whose processing would be *statistically* convincing (with double-digits and even triple-digit figures in most cells) and comprehensively *meaningful*. Eventually, the quality and quantity of observation will be greatly improved and samples will get closer to the real world.

These are not the only research advances that are presented here. Contrary to most surveys on PK, the kind of data collections that I shall discussed hereafter include *on-line*

experiments, make an extensive use of *quantitative process of qualitative data*, and use *time response* to assess the causal relationships between PK, political reasoning, and political behaviour. Put together, these three methodological upgrades help constitute more useful datasets which, in turn, make room for more meaningful analyses.

On-line experiments cannot be reduced to “split-ballot” methodology now easily applied to surveys via Computer Assisted Telephone Interview software (Sniderman & Grob, 1996). In recent research, an imaginative use of various stimuli going far beyond the drafting of alternative questions was made. Among the tools used, photography (Redlawsk), video (...), magazines (Marquis & Gilliland-Lutz), screen boards, (Prior & Lupia), vignettes (King) and fake web pages (Marcus & MacKuen, Prior & Lupia; Couper, Tourangeau & Kenyon, 2004) are worth mentioning. I shall present here a slightly different variant of such stimuli, the “script” mechanism. Before describing the experiment at length, suffice here to say that scripts are pieces of narratives on policy issues publicly debated nationwide at the time of the survey. At each stage of the series of questions constitutive of a script respondents must make choices, and justify them. Several opportunities to reconsider their first answer are offered to them. They have second thoughts on the themes discussed with the interviewer, including after-thoughts expressed during a post-quantitative survey phase when face-to-face in depth interviews are conducted with 5% of the original sampled respondents. To make it short, a “script” is an interactive set of five or six informative questions, through which counter arguments are systematically opposed by interviewers to interviewees.

Admittedly, the primary purpose of this research design was to stimulate and trace opinion change on policy issues when adequately encouraged. As a secondary goal we intended to explore the affective connotations of words belonging to the vocabulary of “politics” compared to non-political or less political notions. Nonetheless, once the survey was completed an unexpected multiplication of the number of observations made on small samples came as a side effect. This unintentional outcome was even increased by the use of CAQDAS methodology in the processing of answers to a greater number of open-ended questions than is usually the case. Therefore, the CATI-CAQDAS combination greatly enhanced the total number of observations, as well as their core meaning (Brugidou; Moine & Brugidou, 2008). Whenever data are not only collected on groups of people but also generated by variations in each single person’s answers, the amount of data collected is greatly increased. Because it triggers a number of non-dichotomised and iterative answers, the “script” methodology generates a number of additional data even with a limited number of interviews (e.g., in pilot surveys, students samples, focus groups, etc.).

Finally, studying response latency in telephone interviews (LaBarbera & MacLachlan, 1979), and response time to answer interviewers (Bassili & Fletcher, 1991; Bassili & Scott, 1996; Johnson, 2004) opens new avenues for the statistical processing of datasets. Once the usual suspects systematically examined (socio-demographics and politicisation variables), the data still have more to confess: unexpected explanations are suggested by a simple dichotomization of *slow* versus *fast* respondents, an increase in observations made that can be easily accentuated with a distribution by quartile (4 positions on a scale), or a distinction between latency (the time measured between the end of the question and the beginning of the answer) and reaction time (the total length of the statements made by each respondent, if not the time used to answer each particular question).

The purpose of this paper is to show how thinking dynamically (switching from PK to PJ) and processing data inventively (adding on-line, CAQDAS, and reaction time methodologies) may enlarge and consolidate fragile or sketchy datasets. It draws heavily on research in progress on political knowledge in Grenoble – in which I am deeply involved and to which a dozen researchers regularly contribute (“measuring political knowledge”, Agence Nationale de la Recherche, 2003-2008). So far, we tested a number of hypotheses, and

designed a questionnaire that could possibly travel from France to any other countries. At the onset, our goals were (i) to question the very notion of political knowledge; (ii) to build new indicators that could be adopted by foreign partners in future comparative studies on political behaviour elsewhere.

To this end, a pilot survey designed to test a new questionnaire on PK was completed in the two metropolitan areas of Grenoble and Lyon during the months of April and May 2006. In-depth supplementary interviews were made until October 2007 in order to check the reliability, accurateness, meaning, and relevance of the topics selected by us in respondents own views; the possible artefacts induced by the questions order and itemization on the one hand, and their proper wording in French, then English, on the other hand. In retrospect, the questionnaire was affected by some caveats, and we had to revise it. It now seems *exportable* to other democratic countries, as planned at the onset. We view this as an achievement in itself: contrary to US-made questionnaires that loose substance and relevance once translated in another language and tested elsewhere, our survey should be nearly ready to be duplicated. Preliminary data processing gives good indications that the tool is robust enough to resist transplantation in different settings, as evidenced by the very informative distribution of answers on the Quiz question on a non-domestic issue (the name of the permanent members of the United nations security Council, more about that in part 2).

At this stage, I am not able to do much more than to show that adopting an extended vision of political knowledge is conducive to more accurateness, more significance, and more discernment in the use of this concept. It helps assessing the relative explanatory weights of various kinds of variables, i.e., *independent*, *intervening*, and *dependent* variables; as well as *control* and *context* variables - instead of a simple confrontation of explanatory/explained variables. It additionally gives some instances of data growth and homogenisation. All in all, these steps are due to achieve a goal shared by most scholars working in the field: *constituting rich and homogeneous comparable datasets overlapping countries and contexts that may change the conception that we have of the role of PK on attitudes an behaviour.*

Now that the landscape has been depicted, this paper is organized as follows: firstly, I review the existing literature on the constitution of PK datasets before presenting a shortened version of our theoretical model to help readers evaluate the quality of the datasets that will be discussed. Secondly, I discuss some preliminary results of the pilot survey, to validate our assumptions on the quality and quantity improvement of the data collected according to the new strategy described thereof. Finally, I suggest some ways to enrich comparable datasets on PK and PJ. What I am not yet able to do within the limits of this paper is to systematically compare our results to previous findings obtained in other French or foreign surveys (scanty data are available on the Netherlands, Van Schuur, Wijbrandt, & Jan C.P.M. Vis, 2005). I shall keep to a modest strategy and put our own results into context each time it seems profitable.

Part 1. Towards a new theory of Political Knowledge

Why working on political knowledge? A major incentive for scholars is to correct a strange imbalance between a lively academic debate about the allegedly “crucial” or, to the opposite, “negligible” role of political knowledge for the implementation of citizens’ rights, on the one hand; and a scientific void on the assessment of the actual impact of knowledge on political behaviour, on the other hand. During the last twenty years, political knowledge was indeed assumed to be an important factor in explaining political behaviour in the US, and this statement was neither argued nor questioned. Little documented in the USA, it was even ignored in French-speaking countries such as Switzerland where PK is nearly absent from

post-electoral VOX surveys or in databases such as the SIDOS. Actually, Swiss scholars use a “political awareness” index to check if right wing and left-wing electors know the issue at stake in a referendum (French “*votation*”), with a simple 3-scale graduation (low, moderate, and high). To this end, they ask respondents to tell if they know the title and content of a project submitted to vote, as well as [their] knowledge about the voting recommendation of the Swiss government” (Marquis & Sciarini, 1999; Sciarini, Bornstein & Lanz, 2007; Näi, 2007). This remains short of assessing the role of lifetime accumulated PK on various aspects of political life, although the results are more or less converging with our own findings. They may have an interesting point, however, in pointing out that ideology and party alignment matter: according to them, the contribution of political awareness to the explanation of citizens’ votes vary from left to right, a conclusion than we cannot draw from our data as will be shown later. Alternatively, when PK is surveyed on a broader scale (as in the American National Election Surveys, or ANES), questionnaires often limit their quest for PK to items measuring the level of familiarity with political institutions, political leaders, and political parties, without further justification of their inclusion into more encompassing surveys. In short, it is taken for granted that political knowledge matters: to what extent, and why, these two major questions are still unaddressed in the literature. I shall try to answer them with the help of a new theoretical model.

Political Knowledge in the Scholarly Literature

In two famous papers, Luskin (1987 & 1990) defined political sophistication – a mix of “knowledge” and “know-how” often translated by “competence” in French. It views it as a sort of « political cognitive complexity », an « expertise » allowing people to arrange diverging notions thanks to a « grammar of thought » providing citizens with a way to organise a large number of heterogeneous information. This presupposes that « sophisticated citizens » have an extended cognitive coverage of political issues (Luskin, 1990), contrary to claims made about studies of the American voter (Converse, Zaller). US citizens are usually depicted as « cognitive misers» (Fiske & Taylor), and US scholars even express concerns about the resilience of democracy when electoral turnout and “social capital” allegedly decrease (Putnam, 2000). According to some authors, on the contrary, representative democracy is nonetheless comforted by a low interest in politics, and a low electoral turnout. These are but ordinary conditions of efficacy, since political regimes would be overloaded with too many demands if every citizen was knowledgeable enough to formulate his or her own informed views on most policy issues (Dahl, 1994). Lupia and McCubbins (1998) and Lupia (2000 & 2004) gave an empirical foundation to this democratic paradox: knowledge will never be accurate enough to make policy decisions and select candidates, because it cannot be exhaustive – an argument that ruins political philosophers’ expectations on the ideal prerequisites of deliberation. Therefore, mere erudition is impossible to acquire; it is even useless when one is facing the hard constraints of any electoral campaign. What people need is a commonsensical use of “heuristics”, or appropriate keys to decipher the difficult language of politics with as many “shortcuts” as necessary to cast a sound vote. This conclusion was also supported by Kriesi who claims that “*systematic* opinion formation is essentially *argument based*, while *heuristic* opinion formation is essentially based on *shortcuts*, which use heuristic cues, but do not make any reference to substantive arguments” (Kriesi, 2005: Barker, Hansen, 2005). Even when reasoning systematically overcome piecemeal argument-based reasoning, and encompasses heuristics, it is limited to an elite (Näi, 2007).

However, these interpretations are far from meeting the expectations of political psychologists, a new brand of social scientists that try to borrow their knowledge equally from political science and psychology. Experiments through which they try to probe their hypotheses show a different portrait: despite their lack of consistency “content-free”

arguments (i.e., void statements about the “complexity of things”) may impress rank and file citizens (Sniderman, 1994, 2002; Sniderman & Grob, 1996; Grunberg, Mayer & Sniderman, 2002); “cajoling” respondents help them express radical and non conventional views about democracy and politics (Mayer, 2002); images of candidates may bring about “insincere” votes that do not reflect citizens’ true preferences (Redlawsk, 2004); “anger” is conducive to stubbornness, not to an unending quest for more accurate information before judging a policy (Markus & MacKuen, 2000; Huddy, Feldman & Cassese, 2005). Finally, even when they have some basic knowledge on policy issues, citizens resist new but dissonant evidence and fail to infer new behaviour from new information (Redlawsk, 2006).

To assess the PK effect on attitudes, the process via which a person increases her political awareness, encodes new information, memorizes it, and retrieves it when necessary must therefore be documented. This entails switching from a mere collection of civic knowledge indicators to a new strategy: *tracing current policy preferences to private discussions and public debates in which individuals must take side and display some opinion consistency* (Eveland, 2004; Steiner, 2004). This in turn compels them to collect and refine arguments; resist dissonant counter argumentation; repair deviations, “deflections” in situational meanings; or overact to discount an emotional bias of which they become conscious, and compare present situations to previous or following ones (Isbel, Ottati, Burns, 2006). In short, tracing the whole process of judgement requires refined models of causality.

A New Theoretical Model of PK

The model we designed relies on several assumptions: (i) politics lie within the realm of *emotions*, passion, beliefs, political identification, loyalty, and early alignment; (ii) politics are a rational choice domain, citizens know what their *interest* is, they choose when to vote and when not to vote, and for whom or what; (iii) politics are also made of *rationalisation and compromise*: citizens have some capability to evaluate policy measures, and participate accurately in the public debate.

The first assumption comes from what could be called a “*psychological*” model (Kuklinski, 2001; Dolan & Holbrook, 2001; Clore, Schwarz & Conway, 2001). Social psychologists assume that emotions matter more in politics than in others social realms: the list of emotions involved in making a political judgement includes happiness, pleasure, sadness, sufferance, desire, disgust, etc. However, two particular emotions have a special role in politics: *anger* and *anxiety* (Marcus & MacKuen; Isbel, Ottati, and Burns, 2006). It is also hypothesized that information (i.e., facts, figures, and events) is memorized in proportion to the emotional impact attached to it (Marcus explains this with his “affective intelligence” concept, 2000; 2002; see also his last edited book on the “Affect Effect”, 2007). Moreover, politics is taboo, as money and sex are; therefore most existing surveys were not carefully designed to capture this concealed aspect of social life. Lastly, citizens are affectively attached to “schemata”, like political ideology and reference to a political party (or faithfulness to a personality): even if new information may rationally change their views about an issue, it will neither change their opinion nor their vote. Citizens making choices according to “stereotypic judgment” (Riggle, Ottati et alii, 1992) usually tend to stick to their previous position, or rearrange their perception of the situation to make it fit unexpected information (Isbel, Ottati, and Burns, 2006).

As for the second assumption (the “*Rational Choice*” model), it offers opposite views on democracy – views that authors of this persuasion believe more fitted to low electoral turnout, and low confidence in politicians: citizens pursue their own interests in a selfish way; consequently, they might dramatically change opinion about a particular issue if they thought appropriate to do so; voting is strategic, citizens are not aligned, they may switch bluntly from one end of the political spectrum to the opposite one.

A third, “*political*” model, is also available on the scholarly market (Sniderman, Brody & Tetlock, 1994): *reason matters*, albeit to a *limited* extent; as evidenced in many comparative surveys most citizens are *fond of politics, arguing, debating*. Some scholars call these enlightened citizens “active rational voters”, other refer to them as a “reasoning electorate” (Tiberj, 2004). The more knowledgeable citizens are, the more they are prepared to *correct* or *complete* their ideological alignment according to new information, the more they will be able to *compromise*, or be *convinced* by sound arguments that make sense for them.

These explanations are but ideal-types designed to make research paradigms possible. In real life, it is well known that people do not ever, nor do all behave according to a particular theory. Neither *emotion* nor *reason* nor *knowledge* alone fully explains actual political behaviour. Consequently, they must be combined to catch the peculiarities of various types of political behaviour. This is the reason why our conception displays more “syncretism”. To link the three approaches we make three assumptions:

- *Emotions* explain how people vote or *side* overall with *political parties and political leaders*.
- *Reason* explains how people *assess* single *policy measures* (like a new labour law; a reform of higher education; a ban on food import).
- *Knowledge* explains most of the *variance* in *political attitudes* as recorded by quantitative and qualitative surveys notwithstanding their purpose (opinions about the next election, about war, about the enlargement of Europe, about globalisation, the death penalty, abortion, etc.).

In order to fit to these assumptions, we must redefine political knowledge (PK). According to us, political cognition is a cumulative process helping citizens to reinterpret “on-line” any information accruing to them. Therefore, we are not only concerned with the list of *constitutional institutions and roles* played by prominent characters, and how this roll call is stretched during the socialization process. We were also interested in *politically relevant* knowledge, i.e. knowledge about negotiations, leadership, autonomy, etc. To better capture the finest components of such an enhanced type of political knowledge, we raise four questions.

- Where does political knowledge *come* from? It seems obvious that politically relevant information differ from political knowledge. For instance, some knowledge on societal interaction may have a deep impact on behaviour (such as knowing how to influence others or avoiding being influenced by them, Schreiber, 2007). Knowledge about causation (providential, determinist, or probabilistic if not purely accidental) may also contribute to adopt a particular stance on the political process, as will knowledge about life experiences (happy and unhappy ones). Eventually, insistence to enlighten people, whether inscribed in political institutions, political culture, or political campaigns, may have differentiated and unanticipated effects on individual knowledge about current policy issues.

- How political knowledge is *used*? In an emergency, people might not be able to convert straight ahead their deeply incorporated knowledge into a sound argument. Finding the accurate information might take more time than allowed by interviewers or debaters, particularly if emotions were intense. Some information would at any rate remain unavailable, and some would remain on the *tip of the tongue*. Some accurate information would not be used because it would be mistaken for an inaccurate one (or people will be afraid to make an incorrect judgment). Finally, some would just be *plausible* and therefore politically relevant, albeit factually incorrect (e.g., naming Kofi Annan as the UN SG in 2007).

- Is there a *continuum* from information to involvement? Contrary to the usual assumptions, we postulate that it is only when certain prerequisites are fulfilled that this

statement can be held. Although mainstream theories assume that the more knowledgeable people are, the more they participate in politics, we considered on the contrary that a lack of political involvement is a possible outcome of improved information leading to a “hyperchoice” situation in which it would become extremely difficult to decide (Schemel, 1998).

- Is political knowledge the *same everywhere*? Although doubts may exist about the actual influence of context on PK, it is a possibility that knowledge varies according to country history, regime, and conjuncture. Since scholars usually do not question the conventional democratic wisdom according to which PK is more or less similar worldwide they simply duplicate in their own language questions worded in English by U.S. scholars, or scholars publishing in English. Admittedly, political knowledge may well fulfil the same function in various systems, at least democratic ones. This does not imply that it has a similar content, or that people make the same use of it. But it certainly means that room must be made for international and longitudinal comparisons in drafting questionnaires, selecting indicators, designing methodological tools, and singling out the most appropriate statistical techniques (Milner, 2003).

Modeling PK and designing tools. Particular empirical measures do not make sense if not generated by a theoretical model specifically designed to draft questions relevant in any national context instead of being conceived for a domestic audience.

To build such a model, we must take into account that citizens may be involved, loosely involved, apathetic or dissatisfied with politics. But we cannot infer from the nature and accurateness of their knowledge the kind of political concern, action, or involvement that they will eventually choose to adopt. With two initial variables only (*information*, as an independent variable; and *involvement* as the dependent one), we may build a 3x4 matrix of political attitudes. Three additional intervening variable, *political knowledge*, *political interest*, and *proximity with a political party*, are nonetheless required to explain how politically relevant information may be converted or not into actual political behaviour (as shown on table 1).

Table 1: modelling the decision making process

| 1. Meta variables | 2. Ordering variables (3 categories: novices, experts, intermediaries) | 3. Control variables | 4. Independent variables | 5. Semi independent variables | 6. Dependent variable |
|--|--|--|--|---|---|
| 1.1. Context Conjuncture Institutions Language Culture Religion | 2.1. Political knowledge as a stock (a 10 level scale, or “Quiz”) 2.2. High tech literacy computer use Internet use e-mail use SMS use | 3.1. Personality risk-taking, gambling, deference, sense of self efficacy causal belief principled beliefs 2.Socialisation & Biography Political discussions at 15 Political discussions with workmates, and significant others | 4. Socio demographics: Gender, Age, Education and diploma, occupation Social class | 5.1. Political cognition as a process: perception, encoding, memory retrieval, systematic v/s stereotypic judgment 5.2. Political awareness: interest, information & media use 5.3. Party proximity | 6.1. Policy judgments: opinion change during the “script” phase 6.2. Involvement: Opinionating Siding with a Political Party or a political leader Voting Demonstrating Using non conventional forms of engagement in politics |

At this stage, we look for appropriate ways to capture both kinds of knowledge, knowledge as a *stock* (the classical definition of PK) and as a *process* (the reorientation towards political judgment, or PJ) that we are endorsing). However, we do not forget that in the long run research on political *knowledge* should in our view focus primarily on political *judgement*. We therefore assume that a *correct judgment* (i.e., faithfully reflecting the motivations of the citizen) might nonetheless stem from *incorrect information*: our main hypothesis is that *citizens compensate for their sketchy information and deficient knowledge with correct political judgments*.

To test this hypothesis we designed two different sets of tools, the ‘Quiz’ and the ‘Scripts’’. As many scholars trying to assess the cultural capital available to each respondent (Barabas, 2001; Delli carpini & Keeter, 1993) we designed a ‘Quiz’, composed of a list of questions on which people scored on a correct/incorrect scale – or, more precisely, on a correct-plausible/incorrect-non opinionated scale. Then we used a different method to model respondent’s ways of reasoning and arguing: the ‘Script’. As said earlier, this is a narrative told to respondents during the interview, in order to assess the statistical relationship between the new information conveyed by such short stories and the related change in attitudes on public. In our view, *scripts are proxies for varieties of political judgment*.

We did not use ‘Quiz’ per se, as is frequently the case in related works: in our mind, this tool is only a convenient standard to rank respondents according to their level of PK (i.e., high, medium, or low). Incidentally, whereas we used “Quiz” questions to measure an *achieved* level of knowledge, we also drafted questions to evaluate the degree of sophistication of the information process conducive to this cognitive capital, noteworthy Internet use and computer literacy (included in the model as « high tech » skills). Finally, to evaluate the *net* contribution of knowledge and argumentation on opinion and behaviour, we controlled for several variables, like (a) personality (with questions on political socialization, and preferred modes of decision-making), a means to assess the scope of guessing within the range of answers collected; and (b) political attitudes (principled beliefs, social values, political behaviour).

Part 2. Preliminary findings

The survey. The field survey took place between April 27 and May 13, 2006. Although we designed it as a *pilot survey*, putting our priority on testing the wording, ordering, and the split-ballots' effectiveness, the respondents' reply to it was far more enthusiastic than expected. To our own bewilderment, we were able to collect 507 interviews instead of 350 in the same span of time. Knowing that the Eurobarometers are now using national samples with only 500 respondents we decided to process the data with more ambition than just testing our methodological instruments. We felt justified to do so since the demographics of the sample are little biased in comparison to the demographics of the global population (although the persons we interviewed were a little more educated)¹. Eventually, the total number of observations was greater than 507 (actual number of interviews), but more (with the inclusion of one to three opinion changes for every single respondent).

To understand why respondents were so cooperative it must be stressed that the political and interactive aspects of the survey may have teased them, compared to ordinary telephone polling, or national surveys on political leaders' popularity and chances to be elected – this often came out in the face-to-face interviews made several months later. Since there was an explicit interest in the questionnaire, very few « Do Not Know », and « No Answer » were recorded (this in turn bringing the percentage of valid data to a high). On the contrary, a majority of the respondents accepted to give their address in order to make later arrangements for face-to-face in depth interviews. And many complained about the relative frustration felt when the interview came to a close, once they had been incited to argue and think about a policy issue.

In drafting the questionnaire with an eye on its international reliability we felt compelled to address every single highly debated methodological issue identified in the literature as hampering the quality of a survey. Therefore, we were very sensitive to possible artefacts (Prior & Lupia, 2005; Zaller, 2001), and tried hard to avoid biases that might be due to several factors: the wording of the questionnaire or the question order problems (Schuman & Presser, 1996; Grémy, 1993); the interviewer's identity syndrome (which incites the interviewee to refrain from expressing some particular views and encourages him or her to display opposite opinions views, allegedly more adapted to the supposed personality of a surveyor whose voice is the only indicator of his or her status, race, class, etc., see Davis & Silver, 2003); the treatment given to the “don't know” issue (should they be encouraged, or discouraged? Following Luskin (1987; Luskin and Cautrès, 1999; Luskin and Bullock, 2005), and contrary to Mondak (Mondak 1999, 2003; Mondak & Creel Davis, 2001), we opted for the latter solution. Accordingly, “DNK” were not self declared but ticked by the interviewer on his or her screen when necessary. Finally, one should also consider and assess the possible impact of personal profiles on attitudes (feelings and biography effects, Sears & Valentino, 1997)².

¹ To test the robustness of our techniques (i.e., the sampling method and the CATI system), we shall have a *grandeur nature* test: due to the sophistication of the interrelationships between independent, dependent, and intervening variables, we need a sample of at least 2400 respondents (3000 would better) to fit our objectives. MANOVA models of data processing will be more easy to use with sufficient gross numbers of respondents in 3x2 tables-each cell having a theoretical chance to be filled with enough persons for the data processing to be significant.

² To be exhaustive on survey techniques, there is a slight possibility that a *different survey technique* might produce different results. It is taken for granted in the scholarly literature that CAT Interviews work, with little loss of efficiency and reliability compared to face-to-face interviews. In-depth home or office (or public locations) interviews that are currently done by us tend to confirm this conclusion. However, we could not use in such interviews pictorial, audio and video supports that can be conveyed only in face-to-face interviews or via the Internet. Moreover, some promising experiments designed in the US by Marcus Prior and A. Lupia as well as Marcus and MacCuen cannot be tested in another environment if CATI are used. For instance, comparing the effect of time on performance requires a sort of interactive protocol, with a half sample having to answer each PK question in 1 minute sharp;

Results. Before we got involved in designing a new tool to collect data on PK, some French datasets were specifically constituted or used in a handful of texts, with various wordings, purposes, and samples (Perrineau, 1985; Grunberg & Mayer, noteworthy Chiche, Sniderman, Mayer, 2002; Favre & Offerlé, 2002). All nevertheless point out a sort of French exceptionalism compared to the United States (Converse; Saris & Sniderman, 2005): French citizens are rather knowledgeable; they do have consistent attitudes, a conclusion that is supported by our own data. Safe for this, we were more inspired by the Sniderman-Mayer approach, although we added to their experimental protocol our own touch: counter-argumentation and re-interviewing of the *same* persons compared well to the random assignment of different respondents to split samples). Therefore, it is difficult to draw conclusions from a comparison between datasets, and I shall simply try to vindicate our decisions and sum up some important findings.

Prior to any statistical processing the sample was divided into several parts. First, we distinguished three *levels* of PK (the *experts*, the *unsophisticated*, and those who displayed an *intermediary* score on knowledge questions), a choice made by most scholars in several countries (justified on methodological grounds, see....; as well as a necessity in recoding answers); second, we selected two dimensions of opinion change (*change/do not change*). Then, data were processed in order to know if solicited *changes in opinion* were related to a high or to a low level of knowledge. We also carefully assessed the weight of other variables on opinion change (the dependent variable), be they explanatory (demographics) or intervening (politicisation).

Before going further it should be noted that a number of bivariate analyses that are not presented here were discarded for their lack of statistical significance. This does not imply by all means that they do not play any role in the linkage between PK and PJ. We have only one certitude: we are no in a position to decide on the cause of this flaw (is the question irrelevant, poorly worded or poorly itemized? Or is the number of interviewees too small?). Consequently, the comments that follow are limited to data whose statistical significance is beyond doubt.

Overall, interviewees are much *politicised*. They also are rather *sophisticated* in their answers (with a low 13% who score badly on the 10 items Quiz scale). Only one picked out a fake name for the Finance Minister on the list of possible incumbents; 67% were able to name him correctly although it is a short term position in the French government); 69% knew that “the WTO” dealt with trade issues; 98% picked the exact voting age. When they gave an incorrect answer, it may have been due to the ambiguity of the question: using “*head of government*” instead of “*Prime Minister*” points to Chirac (23%) instead of Villepin (70%) but this may be due to the fact that the former is “*head of state*”; the enfranchisement of women raises hesitations about the official date (1944) and the first implementation of the new voting right (1946), but altogether these two years were picked out by 75% of the respondents. Such findings are congruent with results recorded in previous surveys on France (noteworthy, MSS 2003 in Denni & Abrial, 2004; ASES 2000 in Schemeil, 2004).

Since we knew that *memory* plays a great role in retrieving the correct answer our last question was so designed as to test the capacity to recollect a figure given by the interviewer

or in 24 hours, with subjects choosing to answer at their own rhythm before the question disappears from the screen (Prior & Lupia). We would like to compare an *Internet survey*-including images and sounds, and submitted to various time constraints-with our CATI protocol, just to check that there not too many important aspects that are misrepresented in telephone interviews. The advantage of Internet surveys is their low cost, and high capacity to reach quite a number of people that would have been left apart by a more traditional sampling method (this is why Paul Sniderman and Marion Dust are now turning to such a tool).

during the interview. Most respondents (81 %) easily passed the test (although 30% of those who were not able to name a permanent member of the UNSC did not). To assess the importance of these last finding, we should consider that precise figures were really difficult to retrieve: to take but one example, most people knew that the health budget was imbalanced, but they greatly hesitated about its range (21% thought in millions, 39% in billions).

Discussion. On the relationships between PK and other variables of our model, some general comments are worth making.

1. As hypothesized, there is a *positive correlation* between political *sophistication* and *politicisation*: the more knowledgeable people are, the more interested in politics they may be, and the more eager to discuss it – with a limitation: this does not imply that they are involved as militants or even voters (Table 2). This is consistent with other surveys’ findings, as evidenced in Luskin, 1990, 344: according to his processing of US data, political interest greatly enhances sophistication to a maximum of 15 points, even “when other variables are discouraging”, i.e., predictive of a low PK (like weak exposure to the media, shortened education, etc). Although this may seem puzzling, in our survey as in most US surveys, education and age have minimum influence on PK, whereas political does. In arguing and debating, politics matters more than social condition.

Table 2: Politicisation Index

| | | | Global Knowledge (Multiple Component Analysis, by quartile) | | | | Total |
|---|---------------|--------|---|-------------------------|---------------------|------------------------|--------|
| | | | Knowledge - (4) | Knowledge - - (12,5) | Knowledge + (17) | Knowledge ++ (19,5) | |
| MCA Politicisation Index (Politis) | Politi - - | N | 56 | 28 | 26 | 15 | 125 |
| | | % Line | 44,8% | 22,4% | 20,8% | 12,0% | 100,0% |
| | Politi - | N | 29 | 49 | 27 | 25 | 130 |
| | | % Line | 22,3% | 37,7% | 20,8% | 19,2% | 100,0% |
| | Politi + | N | 29 | 32 | 35 | 33 | 129 |
| | | % Line | 22,5% | 24,8% | 27,1% | 25,6% | 100,0% |
| | Politi ++ | N | 13 | 17 | 40 | 53 | 123 |
| | | % Line | 10,6% | 13,8% | 32,5% | 43,1% | 100,0% |
| | N | 127 | 126 | 128 | 126 | 507 | |
| Total | % line | 25,0% | 24,9% | 25,2% | 24,9% | 100,0% | |

2. A *limited number* of respondents *changed* opinion when invited to reconsider it: even those who acknowledge the soundness of the argument tend to stick to their earlier position. This is a source of majors concerns for research on political knowledge, since attitudinal change observed is always parsimonious (i.e., within the range of 4 to 15 %, see (Fishkin & Luskin; Redlawsk & Lau; Lodge & Taber; Prior & Lupia; Marcus & MacKuen; Sniderman & Tetlock; Marquis and Gilliland-Lutz). Why continuing to explore the role and scope of political knowledge in a democracy if (i) it may have little or no impact on political behaviour; (ii) facilitating the acquisition of political knowledge is not a promise to bring citizens back to the polls? Well, we should not be too prematurely discouraged by such findings. Firstly, most elections are tied enough

to depend on marginal voters, and the electoral swing is more often than not inferior to 5% (Heath, 2002). Secondly, and this may well be one of the most important findings of our previous investigation, in some experimental conditions opinion change may be much larger: for instance, using a new tool to stimulate self-reflection we obtained an unexpected 23% opinion instability rate – according to Donald Greene, an 8% variation between intention not to vote and actual turnout on election day following experimental manipulation is “gigantic” (Greene, 2006). Moreover, since societies are allegedly experiencing a cognitive turn (Rosenau, 1991 2006; Inglehart, 1994), a small but increasing proportion of knowledgeable persons will at any time generate a possible change from majority to opposition on policy issues, not only in general elections but also in public debates about a particular domestic or international problems. Since this group is restrained, however, we need a greater-*N* to assess the specificities of “opinion swingers”.

3. Those who did change opinion abandoned their original conviction more easily when confronted to a *technical* issue that *does not concern them* directly (the enlargement of Europe) than when addressing a *technical* issue that *applies to them personally* (health expenditures): this is easily understandable in our model, since acceptance of dissonant information is positively correlated to its degree of complexity and negatively correlated to ideology and party identification. Finally *emotional* issues (homosexual unions) display the fewest number of changes recorded, as hypothesized (some aspects of politics at the very least are passionate and taboo).
4. *Experts and amateurs are not dichotomized categories*. There are self-confident experts proud of their knowledge, who do not change opinion when confronted to dissonant information; and cautious experts, who sincerely consider alternatives before making decision. Amateurs are not only varying in the scope of their ignorance; they also vary according to their subjective feeling of incompetence or to their deference for the interviewer. The former take their time to answer, the latter quickly retreat from their previous opinion when exposed to a counter-argument.

Beyond these corroborative measures of our main hypotheses, the results displayed some counterintuitive information on PK; on the relationship between PK and PJ; on the connection between political information and political involvement.

1. First, *the UNSC item* already effective in the 2000 ASES survey (completed during the Fall of 2000 in 9 European and 9 Asia countries as a joint ECPR/Japan PSA survey (Sinnott, 2006, Schemeil, 2004) is a good proxy for the 9 remaining Quiz questions since it explains as much variance as the aggregated answers to all other Quiz variables. In our 2006 survey, the UNSC question is still more discriminative on politicisation than the 2000 one. For example, propensity to demonstrate is more affected by a correct knowledge of the composition of the UNSC than by the combined index of political knowledge.
2. Second, sophisticated persons do not feel close to any political party or leader. However, discussing politics within the family is conducive to score better on the Quiz scale: nearly six experts in a ten have such discussions everyday or nearly so (compared to 1.5% of the least knowledgeable); 88.6% do it at least several times a week (versus 28.4% of those who score poorly). More than 7 ignorant persons in a ten *never* discuss politics within their family. Knowing one’s parents political beliefs is also discriminative: most of those who remember them well are experts, but experts are not a majority, even among those who have a pretty good recollection of their teens (48%).

3. Third, it is clear that the more competent people are, the more they depend on the daily press for their information – a well documented trend, although nowadays TV tends to attract “experts” to a surprising extent (20% say they are influenced by the TV programs they watch, compared to the 35% who confess being influenced by the press).
4. Fourth, although most control variables have little distinct influence on behaviour, or little added value to the use of knowledge variables, it is no surprise that *personality traits* (Schwarz, 2000; Wach & Hammer, 2003) are more influential than sources of information, but less important than memorized knowledge. For example, trying to convince others by all means is definitely correlated with the level of sophistication: the more knowledgeable people are, the more determined they are to disseminate their ideas. Turning to a second aspect of people’s temper (propensity to change their opinion), novices and experts have the same reduced probability to switch from a long time held belief to a new one. A similar remark can be made about losing one’s temper, siding easily with others, or listening to opposite opinions: character has a consistent but limited impact on the acquisition and use of political knowledge. The main factor here is clearly the level of sophistication, rather than personality traits.
5. Finally, among possible ways to make a decision (is the preferred method risk averse, intuitive, informed and documented, or risk taking?) the sample is clearly split in two parts: the *less knowledgeable* are *cautious* and *intuitive*; the *most sophisticated* are *methodical* (they want to be fully informed before making a decision) and *risk taking* (this being in a way a symbol of their political optimism).

Part 3. Lessons for future research

It is now time to review some methodological benefits from the collective process that led us to reshuffle our research design, with a new insistence on PJ rather than just PK. To this end, I shall make a distinction between already achieved profits, and profits to come.

Methodological gains. Several profits can stem from the constraints we faced within the constraints of a pilot survey. To start with, some correlations and regressions are statistically significant in spite of a small-*N* (graph 1 gives some evidence on this), and a few are even close to linearity (graph 2). For instance, the more knowledgeable a person is, the less she changes opinion (the instability index decreases as a function of the increase in sophistication, see graph 3), a finding comforting a 2000 survey, especially when the respondent knew the correct answer to the first question in a series of three, including one counter-argument: in that case, the probability to change opinion following a counter argument is negatively correlated to sophistication. Change is on the contrary likely among sophisticated persons when they find out that their first answer was wrong; in that case, they tend to rectify their choice in order to make it more congruent with their knowledge and their ideological preferences (Sniderman, Jackman, Tiberj, 2002).

However, one major lesson of the data processing of this pilot survey is the weighting of the impact of demographics and socialisation variables on attitudinal change by political variables such as *political interest* (graph 4), frequency and history of *political discussion*, or lack of *proximity felt with political parties*. These three intervening variables play an undisputable role in affecting opinion change.

Graph 1: the consistency of knowledge held

Measuring the predictive effect of each correct answer on other exact answers to the Quiz (col.1, Alpha Cronbach: the higher it is, the more connected to other correct answers the item is)

| | | |
|-------------------------------------|--------------|--------------|
| France membre, UNSC? | 0,858 | 0,031 |
| United States membre, UNSC ? | 0,770 | 0,000 |
| UK membre, UNSC ? | 0,672 | 0,000 |
| No country selected | 0,582 | 0,033 |
| Russia membre, UNSC ? | 0,430 | 0,274 |
| China membre, UNSC ? | 0,292 | 0,382 |
| DNK/DNA | 0,183 | 0,007 |

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Graph 2: example of apparent quasi linearity

Answering time is linked to age/activity

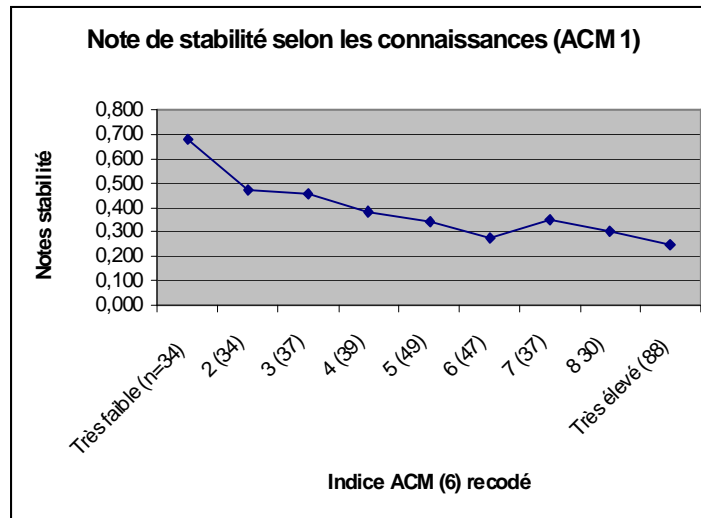
| | | | | | | |
|----------------|---|-------|-------|-------|-------|--------|
| Retired | N | 19 | 27 | 27 | 49 | 122 |
| | % of activity group | 15,6% | 22,1% | 22,1% | 40,2% | 100,0% |
| | % of each quartile (25%) answering time | 15,0% | 21,1% | 21,4% | 38,9% | 24,1% |
| Student | N | 25 | 18 | 7 | 9 | 59 |
| | % of activity group | 42,4% | 30,5% | 11,9% | 15,3% | 100,0% |
| | % of each quartile (25%) answering time | 19,7% | 14,1% | 5,6% | 7,1% | 11,6% |

Fastest quartiles left, slowest quartiles right

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Graph 3: Level of PK and opinion stability

Knowledge and opinion change after a counter argument



1

Graph 4: causality revisited: the role of interest in politics
 Respondents uninterested in politics are quicker to answer

| | | | | | | |
|-----------------------------------|--------------------------|--------|--------|--------|--------|---------|
| Interested in politics | N | 55 | 72 | 72 | 82 | 281 |
| | % Political interest | 19,6 % | 25,6 % | 25,6 % | 29,2 % | 100,0 % |
| | % total interview length | 43,3 % | 56,3 % | 57,1 % | 65,1 % | 55,4% |
| Not interested in politics | N | 72 | 55 | 54 | 44 | 225 |
| | % Political interest | 32,0 % | 24,4 % | 24,0 % | 19,6 % | 100,0 % |
| | % Total interview length | 56,7 % | 43,0 % | 42,9 % | 34,9 % | 44,4% |

Further profits. To be exhaustive on our research program, and in spite of the fact that it will be completed in 2009-2011 only – too late to bring adequate results for this workshop –

let me explain briefly what we have in mind as a logical extension of what has so far been done. Our next step is to build large datasets in various “national” contexts to check the methodological tools tested on a reduced scale, and make sure that our preliminary findings can be duplicated elsewhere. For this *cross cultural comparison*, we shall add to the model what we call “meta variables” or “contextual” variables – a fourth means to complement our datasets. So far, the European Social Surveys were apparently the first to consider this as a problem in data collecting. Their designers (noteworthy Roger Jowell) recommend specific techniques to recollect some information about events at the time of the polling in each country. In spite of these timid moves, the potential role of such parameters is still non assessed, save for a deferential reference to “political culture”.

This will help us digging into the context effect in a more sophisticated way than is usually the case. According to us, four series of meta variables at the very least should be tested before claiming that specificities have been identified. They are:

History of State-Building: constitutional regime, early cleavages at the root of recent history

Economic growth: rate, shape (industry, services, import-substitute or export-oriented)

Political Cultures: content, prominent cleavages, mode of coexistence of different public cultures

Institutions: institutional arrangements, systems of voting, decision-making procedures

It is of note that this list of possible meta variables is larger than in Gordon and Segura (1997), to the best of my knowledge the first to give some statistical evidence of a link between national context and political sophistication. In their pioneering paper, they focussed mainly on the underpinnings of “democratic” politics: party system, and electoral system. Moreover, their measure of sophistication was rather stereotypic since it relied on single variable, the capability to place parties on an ideological axis. This is why, despite convergence in spirit, we cannot yet endorse their statement that domestic institutions, because they frame the conditions under which personal choices are made, explain a greater proportion of the variance (25%) than individual capabilities and demographics.

In order to check the combined impact of institutions, historical and present cleavages, political and electoral conjuncture, as well as culture incorporated within language, the mores, and whatever is “taken for granted” about politics (i.e., compromise or confrontation; participation or delegation; trust or mistrust; tolerance or xenophobia, etc.) we have imagined a three cuts protocol of surveys.

As a first trial to assess the *context effect*, we shall soon survey a single region (Rhône-Alpes), and compare the results to those obtained on the rest of France (quotas, 800 to 1200 interviews). Our second cut will consist in a *Franco-Swiss comparison* (same N). The third cut will go far beyond these core European ‘distant proximities’, and compare “incomparable” (Detienne, 2000). For obvious reasons Switzerland easily imposes itself as the best terrain for an experiment: it is a neighbouring country, partly French-speaking, and the histories of both states are intertwined. What Switzerland offers is the possibility to test PK in a more participatory federal regime. This will provide us with a quasi-experimental situation in which French-speaking Swiss institutional, historical, and cultural factors will be checked against their equivalents in France, in order to assess the net contribution of political knowledge on political reasoning once the meta variables controlled. There are few instances of international surveys documented in the scholarly literature. To give but a simple example outside Europe, Vincent Tiberj recently shown that the French were more knowledgeable than American voters: they are able to make thin distinctions between “the Left” and “the Right”, whereas American do not easily tell “Liberals” from “Conservatives” – although they may

clearly oppose Republicans to Democrats. Explanations given to cross national differences in behaviour rely on degrees of political sophistication (which plays a role in the USA, but nearly no role at all in France where the political interest is determinant and independent from education (Tiberj, 2004). To put it briefly, in France *conjuncture* and saliency, competitiveness, etc. matter as much as does the *constitution* in the US.

Language issues may also interfere with other variables: to take but one example from the World value Surveys and European Value Surveys datasets, “being proud of one’s country” may be understated in the Netherlands (where it is considered inappropriate to express pride) and overstated in Italy (a more chauvinistic society) although Dutch are actually more prone than Italians to die in defence of their motherland – with the French in between: since French vocabulary is not a source of inconsistency, pride and sacrifice are quite proportionate in France, contrary to the two aforementioned countries (Bréchon, 2002). Consequently, despite much attention given to the translation of the French draft there is still some improvement to achieve. Before revising the English version (and the Turkish, German, etc.) questionnaire we shall wait for the results of the CAQDAS processing made on the in depth second wave face-to-face interviews still not completed. However, translating from French to another language is a minor problem with regards to relevance: to make sure that questions on PK asked during the Quiz phase, as well as the issues proposed for debating to respondents during the script phase are of real concern to most interviewees three solutions are possible. The first consists in picking out among the many issues benefiting from a great media exposure those that seem to be really transnational (like climate change, nuclear proliferation, human rights, declining turnout, etc.). This strategy cannot be adopted since such issues cannot be converted in to scripts. A second strategy is conditioned to much preliminary work: selecting the themes to be debated randomly requires a corpus of possible themes, which will be tremendously hard to constitute. A third way is therefore recommended: to use media metrics, and select those issues that make sense at the time of the interview. The automatic aspect of media metrics is of the essence here, since it relieves survey designers from their subjective assumptions. Of course, during the pilot phase of our research we could not afford to select three themes according to this preferable methodology: therefore, we came to adopt the three issues by consensus, after long hours of discussion on the most appropriate themes for an experiment, with only one instruction at the onset: designing scripts on an economic, a moral or social issue, and an international one.

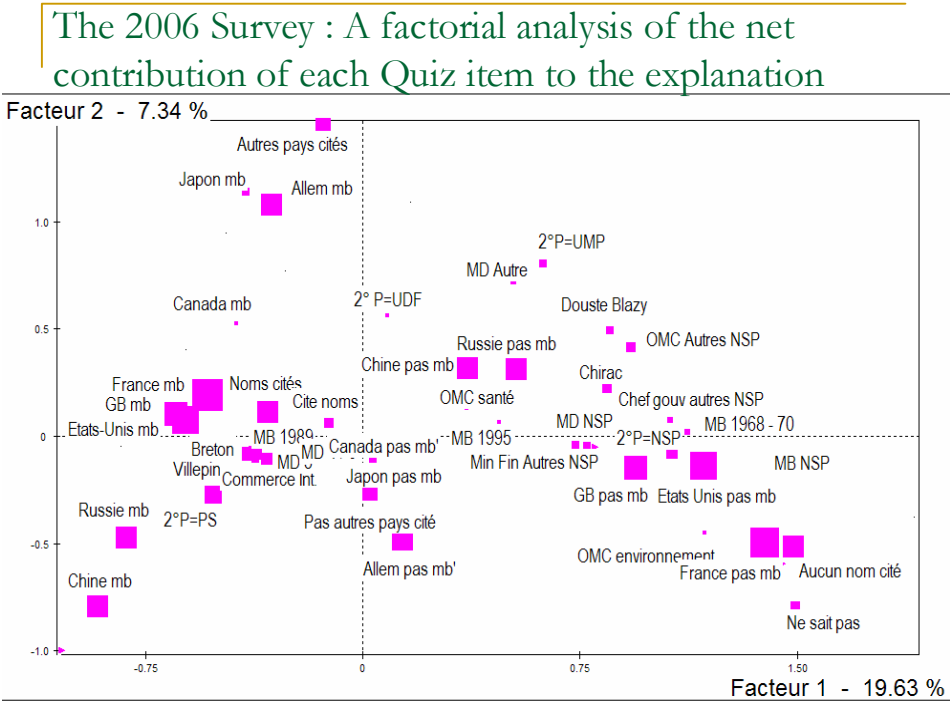
However, geographical and affective proximity is not sufficient to select a field of investigation that would meet the requisites of our theoretical model. Comparing regional and national France, then France to French-speaking Swiss remains within a proximity perimeter. To check institutions, language and culture (plus religion) effects on a larger scale, we must add a minimum number of less similar countries. To test our model and assess the impact of meta variables versus the usual variables, we plan to proceed from the closest to the most distant case on an eight positions scale (starting with regional France as box 1³; and the rest of France as box 2). Accordingly, beyond French-speaking Switzerland (box 3), five supplementary case-studies will be made in the next three years: 4. *German-speaking* protestant and very participatory *Switzerland*; 5. *Quebec*, a French-speaking east coast part of Canada, mostly catholic, with British-style institutions; 6. *British Columbia*, an English-speaking participatory and Pacific entity; 7. *Turkey*, a democratic, half-European and half Asian western oriented albeit Muslim emerging country. 8. *Japan*, a non western democratic, industrialized and rich country with a homogeneous population and multiple creeds – the most

³ In another research headed by Bernard Denni in the same PACTE laboratory, “context” is also conceived of as “local”, i.e., it takes the guise of “neighbourhood” and “networks of sociability” instead of being only cross cultural. Considering such possibility would add a fifth dimension to our attempts at enlarging our datasets. This last research is just engaged, and the preliminary proceedings of our work are pending.

estranged context. When these seven cases are studied and the data collected processed, we hope to be eventually able to discern the actual impact of contextual variables on the explanatory relationship between political knowledge and political behaviour⁴.

Beyond cross national comparison another possible benefit from our strategy should be the deepening of our knowledge on the distribution between “*plausible*” and “correct” answers. As shown on graph 5 and 6, this most obvious next step to climb in a quest of completeness is promising: beyond the two circled zones depicting “exact” and “incorrect” answers on the four axes factorial analysis, a third one is sufficiently massive to advocate further research. No doubt that going in this direction will bring more data with the same initial N. We are also confident in the possibility to show that people can be somewhat knowledgeable and make minor mistakes, mainly anachronisms. Including Japan and Germany among the UNSC permanent members may be a mere anticipation of UN reform to come.

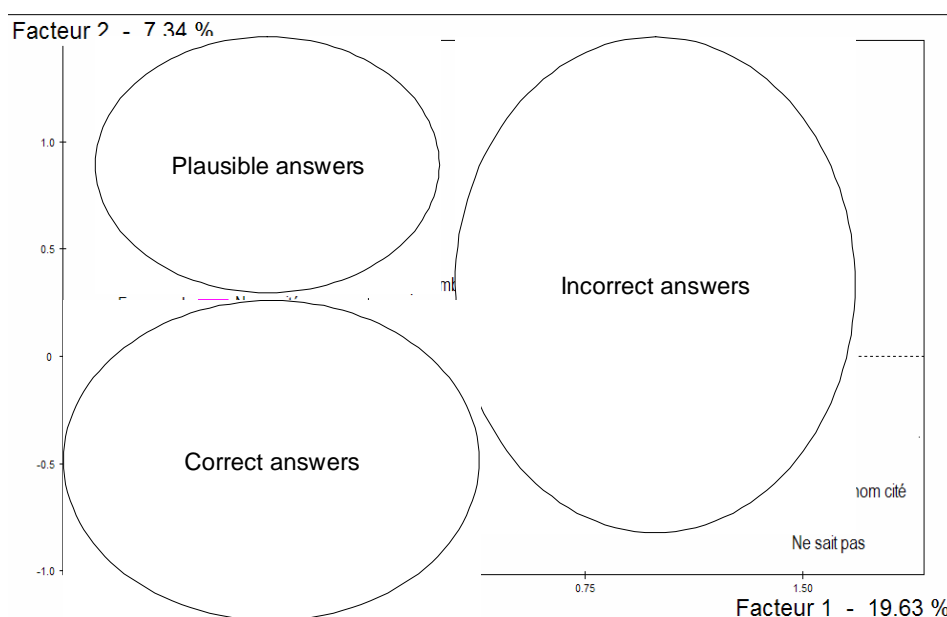
Graph 5: Looking for a three-categories typology, first cut



⁴ Funding and expertise are now available for three large scale surveys: the Rhône-Alpes, rest of France, and Turkey polls. Promising collaboration seems quite feasible with German-speaking Switzerland (Hanspeter Kriesi) and Japan (Ikuo Kabashima). Negotiations with Canadians will follow suit.

Graph 6: Looking for a three-categories typology, second cut

The three circles of answers



Finally, as a further move towards completeness (if this were a reasonable goal!), we wish to consolidate our findings on the complex system of relations between emotional states and levels of PK. To this end, we shall make an extended the use of associating stimuli and sensors (simple and complex models of associations are reviewed in Taber, Lodge, & Glathar, 2006). The full range of possible emotions should be explored in a systematic way, and a precise map of political emotions should be drawn (Marcus & MacKuen, 2006; 2007).

To assess memory effects, we should in particular measure with more precision the correlation between *initial* affects and the efficiency of memory retrievals in *subsequent* stages of reasoning. It seems strange that in spite of many attempts to depart anger from anxiety and fear, then relate such feelings to mood (Troyer & Robinson, 2006), the impact of positively and negatively valenced emotions on recollection had never be tested. *Memory* is so far too absent from our analyses: being able to predict conditions under which and for whom recollection will be complete or partial, or even defective, is certainly worth trying in the near future.

We plan to study the relationships between the *emotional* and *cognitive* components of a response to the reading of “political” words on a screen board, using a methodology elaborated by Dittmar (CNRS, INSA de Lyon), Vernet-Maury (UCB Lyon 1), Martin (Lyon 2), Collet (UFRAP Lyon), and Robin (UCB Lyon 1). The purpose of such experiments is to measure neuronal and physiological reactions to stimuli using body albeit non invasive sensors. It has already been used with sensorial stimuli (noteworthy, olfaction), cognitive tasks (problem-solving, geometry), mental images retrieval, and reflex reactions when driving, shooting, exercising, etc. (Dittmar, 1989; 1995; Vernet-Maury, 1991, 1995, 1996, 1999). To these ends, six parameters of the autonomous nervous system are usually measured: (i) two bioelectric parameters (at skin level); (ii) two thermo-vascular parameters (body temperature and blood circulation); two heart and breath parameters (cardiac rhythm and respiration speed). During this new stage of our research, 22 to 40 students over 22 in every field but political science will be tested during periods of about one hour to prevent interferences with fatigue effects. Before entering the experiment room, volunteers will answer a questionnaire on socio demographics, with some indications of his or her level of

PK, and his health condition (to control for possible drugs, psychotropic substances, or pregnancy effects). Then, while sensors will be installed, the protocol of the experiment will be explained to subjects. The experiment will start with a *habituation phase* during which preliminary trials are made but not recorded, and instruments will be adjusted. Then, a *testing phase* will follow. Every minute or so (minimum time to activate the emotional reactions, varying from one subject to another), an audio or video item (this is undecided yet) will be presented to each subject who tick a box on a questionnaire to evaluate it as “positive” or “negative”, and list free associations of words that comes to his or her mind. 12 new items will be used during this phase. Thirdly, a *recall phase* will close the experiment: wiped out of his or her sensors, each subject will try to remind the items, and the valences attached to them. The underlining hypothesis, here, is that the more words emotionally impacted during the second phase, the easier they will be recollected. Data processing will be twofold: firstly, a quantitative analysis of neurovegetative reactions will be done; secondly, a qualitative analysis of a decision tree will be made (Collet, 1997; Ekman, 1983). To give but one example of the de-multiplication of cases that could be generated by a single experiment, several skin-sensors placed on one individual can collect an N as big as 1782 (6 variations in body temperature, blood-pressure, cardio-vascular rhythm, electromagnetic activity, respiration speed and sudation, multiplied by the number of words loosely or closely associated with the word “politics” by the subject – in one of our experiments, as many as 99 notions, each being tested on 3 successive occasions: before the word appears on a screen; when it is briefly showed; at rest). This experimental methodology could even be extended to brain imagery (MRI), to test the hypothesis that politics arouse specific reactions compared to ordinary life, as evidenced by the activation of different brain zones and types of neurones (the “mirror neurones” identified by neuroscientists and discussed in Schreiber, 2007, being good cases in point). Whatever the methodology used, it is very likely that the number of observations derived from a small number of cases will be greatly enhanced. Subjects displaying goodwill and volunteering for these three or four tiers surveys and experiments being sufficiently numerous, the only obstacle to their being scrutinized are legal (i.e., they may be banned by regulations about the protection of private life: in France, for instance, it is difficult if not impossible to re-interview the same respondents and compare their answers or behaviours at each stage of the research in progress).

Conclusion

With many more cases and greater samples, we shall also explore all the possibilities of various survey methods (i.e., Internet versus CATI and face-to-face), as well as methodological tools, be they *quantitative* or *qualitative* (i.e., correlation, regressions, Multiple- and Principle- Component Analyses on the one hand; discourse analysis, content analysis with various software, like Alceste, TROPES and N’vivo on the other hand). Secondly, the multiplication of *national* or *local* cases will open new avenues for the comparative and controlled use of datasets specially designed for a comparative purpose. In this process, we may at some point enrich the dialogical model of political judgment advocated on this paper with a more complex model of causality that would include the “context effect”. We hope to be able soon to help colleagues drafting questionnaires in cross-national surveys substitute to a static and civic if not deferent vision of political knowledge assumed to be elsewhere similar a dynamic and *processual* self-reflecting conception of political judgement that would eventually become *contextual*.

The hardest methodological problem will obviously stem from the difficulty to aggregate at a broader level than usual more atomistic attitudes than is usually the case. If we succeeded and achieve our research at the very point that would close it in our mind, then comparative datasets on PK would count dozens of thousands data, and would take into account new explanatory variables that are usually avoided as “macro” – too macro to be handled, indeed – or too micro – beyond the borders of *social science*, deep into psychology and neuroscience.

Appendix I: preliminary assessments of the achievements and caveats of the survey

1. Other things being equal, we have six *ambitions*:

- 1.1. Firstly, we would like to prove that our main questionnaire might be used in most countries with little modifications to adjust to different conjunctures and contexts.
- 1.2. Secondly, we are confident in the capacity of new empirical studies to show that Internet survey and qualitative in depth surveys may bring about complementary outcomes without alleviating the reliability of the CATI system.
- 1.3. Thirdly, we also expect from our *larger scale surveys and experiments* not only to confirm our preliminary findings, but also to turn latent statistical relations until now concealed due to a lack of sufficient data in our pilot studies into manifest correlations and regressions.
- 1.4. Fourthly we hope to consolidate joint research associating on an equal footing political scientists and cognitive psychologists. This will be an exercise in combining various techniques, different ontology, and a couple of paradigms.
- 1.5. Fifth, we hope to draw a sort of “emotional map” of political feelings, and a diagram of their distribution according to gender, political sophistication, and respective valences attached to the basic components of politics. This would also validate the use of physiological experiments to test political science concepts and hypotheses.
- 1.6. Finally, it will also bring new insights on the democratic predicament, and help to find ways to empower citizens within the framework of a more participatory kind of political regime. On this latter point, comparisons with Switzerland will be particularly helpful, since this country combines a low turnout rate with a highly participatory public culture.

2. However, there are four series of possible *shortcomings* in our present study:

- 2.1. Firstly, we have to check that *statistical non-significance* is not due to the small size of our sample (the one we used for the pilot survey); and that it is not attributable to the way it was implemented (the CATI protocol). This requires a *national poll* in France.
- 2.2. Secondly, we must decide on the position of our indicators on the *specificity-universality axis* instead of considering that our tools will be valid everywhere, and with no assurance that our interpretations are not culturally or chronologically biased; this will need to test our questionnaire in another country (Switzerland).
- 2.3. Thirdly, we should decide better than we did so far on the precise balance between *on-line* information processing and *memory* retrieval, as well as *stereotypic* (i.e., use of heuristics, dirty thinking, cues, etc.) and *systematic* policy judgement (i.e., information processing, dissonance deflecting, etc.).
- 2.4. Fourthly, we should explore in depth the relationship between *affects* and *cognition* (to test, among other goals, Marcus’ hypothesis of an “affective intelligence” in which emotions are conducive to learning, and invalidate Fiske and Taylor assumption that citizens are “cognitive misers”).

Appendix 2 : Excerpts of the questionnaire

[1. The Quiz section]

- **Q48** *Closed-ended*
Can you tell me name of the present Prime Minister? [To interviewers: do not read answers]
 - 1 *Dominique de Villepin*
 - 2 *Other (INSER)*
 - 3 *(DNK)*
 - 4 *Semi open item*
 - 5 *Semi open item*
 - 6 *Semi open item*
 - 7 *Semi open item*
 - 8 *Semi open item*
 - 9 *Semi open item*
 - 10 *Semi open item*
 - 11 *Semi open item*
 - 12 *Semi open item*
 - 13 *Semi open item*

- **Q49** *Open-ended for interviewer (pop-up window on the screen)*

- **Q50** *Closed-ended*
According to you, in which year women were granted voting rights?
 - 1 *1912*
 - 2 *1944*
 - 3 *1946*
 - 4 *1959*
 - 5 *(DNK)*

- **Q51** *Closed-ended*
Could you tell me which party comes second in number of seats at the National Assembly/House of Commons/ etc? [To interviewers: do not explicit acronyms]
 - 1 *UDF*
 - 2 *LCR*
 - 3 *PS*
 - 4 *UMP*
 - 5 *(DNK)*

- **Q52** *Closed-ended*
According to you, what is the WTO about? [To interviewers: do not explicit the acronym; if the interviewee does not understand the question just repeat the acronym].
 - 1 *Health*
 - 2 *International Trade*
 - 3 *Human Rights*
 - 4 *The Environment*
 - 5 *(These four issues altogether)*
 - 6 *(DNK)*

- **Q53** *Multiple*
Five countries have a permanent seat at the UNSC. Can you name these five countries? [To interviewers: do not read answers. If someone names an unlisted country, dial IINSER].
 - 1 *Germany*
 - 2 *Brazil*
 - 3 *Canada*
 - 4 *China*
 - 5 *The United States*
 - 6 *France*

| | |
|----|---------------------------------------|
| 7 | <i>Great Britain (or UK, England)</i> |
| 8 | <i>India</i> |
| 9 | <i>Japan</i> |
| 10 | <i>Russia (or USSR, CIS)</i> |
| 11 | <i>Cannot name any country</i> |
| 12 | <i>(DNK)</i> |
| 13 | <i>Semi open item</i> |
| 14 | <i>Semi open item</i> |
| 15 | <i>Semi open item</i> |
| 16 | <i>Semi open item</i> |
| 17 | <i>Semi open item</i> |
| 18 | <i>Semi open item</i> |
| 19 | <i>Semi open item</i> |
| 20 | <i>Semi open item</i> |
| 21 | <i>Semi open item</i> |
| 22 | <i>Semi open item</i> |

• **Q54** *Open-ended for interviewer (pop-up window on the screen)*

- **Q55** *Closed-ended*
 Could you tell me who is the present Finance Minister?
 1 *Philippe DOUSTE-BLAZY*
 2 *Thierry BRETON*
 3 *Francis MER*
 4 *Claude BEBEAR*
 5 *(DNK)*

- **Q56** *Closed-ended*
 According to you, in which year the Berlin Wall fell?
 1 *1968*
 2 *1970*
 3 *1989*
 4 *1995*
 5 *(NSP)*

- **Q57** *Closed-ended*
 Could you tell me what is the legal voting age in France? [To interviewers: do not read answers]
 1 *18*
 2 *Other*
 3 *(DNK)*

- **Q58** *Closed-ended*
 According to you, is it the municipality, the regional authority or the State that has the legal capacity to provide for primary school equipments?
 1 *Municipality*
 2 *Region*
 3 *State*
 4 *(DNK)*

- **Q59** *Closed-ended*
 Could you tell me how long does a deputy/representative mandate last? [To interviewers: do not read answers]
 1 *5 years*
 2 *4 or 6 years*
 3 *Other*
 4 *(DNK)*

[...]

[2. The Script section]

- **Q67** *Multiple*
The scripts' themes
1 *Social security and health expenses*
2 *Homosexuality and adoption*
3 *The European Union enlargement process*
- **Q68** *Closed-ended*
Let us now talk about health expenses. According to you, is the Health Budget balanced, in deficit, or in excess?
1 *Balanced*
2 *In deficit*
3 *In excess*
4 *(DNK)*
- **Q69** *Closed-ended*
This budget is in deficit. According to you this deficit amounts to... :
1 *thousand euros*
2 *Millions euros*
3 *Billions euros*
4 *(DNK)*
- **Q70** *Closed-ended*
What if I tell you that the correct answer is 12 billions euros? [*Mention here one or two precise and reliable sources of this information*] Are you very much surprised, rather surprised, little surprised, or not surprised at all by this figure?
1 *Very much surprised*
2 *Rather surprised*
3 *Little surprised*
4 *Not at all surprised*
5 *(DNK)*
- **Q72** *Closed-ended*
Do you feel very worried, rather worried, little worried or not worried at all by this figure?
1 *Very worried*
2 *Rather worried*
3 *Little worried*
4 *Not worried at all*
5 *(DNK)*
- **Q73** *Closed-ended*
To shrink the Health Budget deficit, do you think that the appropriate solution would be to limit health expenses?
1 *Yes*
2 *No*
3 *(DNK)*
- **Q74** *Closed-ended*
[If the answer is yes] Among the most frequently advanced arguments, one says that it is impossible to limit the Health budget deficit since an aging population will need more expensive health care for a longer time. Do you consider this argument as appropriate?
1 *Yes*
2 *No*
3 *(DNK)*
- **Q75** *Closed-ended*
Now that you are aware of this argument, do you still think that the appropriate solution is to reduce the

Health Budget deficit is to diminish health expenses?

- | | |
|---|-------|
| 1 | Yes |
| 2 | No |
| 3 | (DNK) |

- **Q76** *Open-ended*
Could you tell me why you still think health expenses must be diminished?
- **Q77** *Open-ended*
Could you tell me why you are now thinking that health expenses should not be diminished?
- **Q78** *Closed-ended*
[If the answer is no] Among the most frequently advanced arguments, one says that abuses may be more strictly monitored. Do you consider this argument as appropriate?

| | |
|---|-------|
| 1 | Yes |
| 2 | No |
| 3 | (DNK) |
- **Q79** *Closed-ended*
Once aware of this argument, do you still think that the appropriate solution is not to diminish health expenses?

| | |
|---|-------|
| 1 | Yes |
| 2 | No |
| 3 | (DNK) |
- **Q80** *Open-ended*
Could you tell me why you are now thinking that health expenses should not be diminished?
- **Q81** *Open-ended*
Could you tell me why you are now thinking that health expenses must be diminished?
- **Q81 bis**
We just mentioned some arguments about the Health Budget. Do you have in mind other arguments, which may be just as important as these ones?
Q81ter (new)
The argument you just gave is convincing. However, there are important studies that could make you revise your judgement. For instance, a survey made by the United Nations' World Health Organization recently produced data that contradict your argument [*“official/expert” argument summed up*]. With this in mind are you still in favour of/against the enlargement process?
[To interviewers: *reference and date of the survey, as well as some precise figures ready to be given if asked*]
- **Q82** *Closed-ended*
Let us now talk about homosexual couples. Today in France, do homosexual couples have the legal resource to live a family life?

| | |
|---|-------|
| 1 | Yes |
| 2 | No |
| 3 | (DNK) |
- **Q83** *Closed-ended*
In France, homosexual unions are authorized, due to the PACS law. According to you the number of countries in which homosexual unions are authorized is

| | |
|---|-----------------------|
| 1 | A couple of countries |
| 2 | A dozen |
| 3 | Two dozens |
| 4 | (DNK) |
- **Q84** *Closed-ended*
What if I tell you that homosexual unions are authorized in two dozens countries? Are you very much

surprised, rather surprised, little surprised, or not surprised at all by this figure?

- | | |
|---|-----------------------------|
| 1 | <i>Very much surprised</i> |
| 2 | <i>Rather surprised</i> |
| 3 | <i>Little surprised</i> |
| 4 | <i>Not at all surprised</i> |
| 5 | <i>(DNK)</i> |

- **Q86** *Closed-ended*
Do you feel very worried, rather worried, little worried or not at all worried by this figure?

| | |
|---|---------------------------|
| 1 | <i>Very worried</i> |
| 2 | <i>Rather worried</i> |
| 3 | <i>Little worried</i> |
| 4 | <i>Not worried at all</i> |
| 5 | <i>(DNK)</i> |
- **Q87** *Closed-ended*
To avoid any destabilization of the family do you think that the appropriate solution is to prevent children adoption by homosexual couples?

| | |
|---|--------------|
| 1 | <i>Yes</i> |
| 2 | <i>No</i> |
| 3 | <i>(DNK)</i> |
- **Q88** *Closed-ended*
[If the answer is yes] Among the most frequently advanced arguments, one says that children brought by homosexual parents have no more problems than other children. Do you consider this argument as appropriate?

| | |
|---|--------------|
| 1 | <i>Yes</i> |
| 2 | <i>No</i> |
| 3 | <i>(DNK)</i> |
- **Q89** *Closed-ended*
Once aware of this argument, do you still think that the appropriate solution is to prevent/prohibit children adoption by homosexual couples?

| | |
|---|--------------|
| 1 | <i>Yes</i> |
| 2 | <i>No</i> |
| 3 | <i>(DNK)</i> |
- **Q90** *Open-ended*
Could you tell me why you are still thinking that children adoption by homosexual couples must be prohibited?
- **Q91** *Open-ended*
Could you tell me why you are now thinking that children adoption by homosexual couples must be authorized?
- **Q92** *Closed-ended*
[If the answer is no] Among the most frequently advanced arguments, one says that abuses may be more strictly monitored. Do you consider this argument as appropriate?

| | |
|---|--------------|
| 1 | <i>Yes</i> |
| 2 | <i>No</i> |
| 3 | <i>(DNK)</i> |
- **Q93** *Closed-ended*
Now that you are aware of this argument, do you still think that the appropriate solution is to authorize children adoption by homosexual couples?

| | |
|---|--------------|
| 1 | <i>Yes</i> |
| 2 | <i>No</i> |
| 3 | <i>(DNK)</i> |
- **Q94** *Open-ended*

Could you tell me why you are still thinking that children adoption by homosexual couples must be authorized?

- **Q95** *Open-ended*
Could you tell me why you are now thinking that children adoption by homosexual couples must be prohibited?
- **Q95bis** *Open-ended*
We just mentioned some arguments about Homosexual unions. Do you have in mind other arguments, which may be just as important as these ones?

Q95ter (new)

The argument you just gave is convincing. However, there are important studies that could make you revise your judgement. For instance, the National Report on Education recently produced data that contradict your argument [*“official/expert” argument summed up*]. With this in mind are you still in favour of/against the enlargement process?

[*To interviewers: reference and date of the survey, as well as some precise figures ready to be given if asked*]

- **Q96** *Quantity*
Let us now talk about the European Union’s enlargement. In the last 5 years how many states became members of the European Union?
[*To interviewers: if the person refuses to answer, dial 9999*]

- **Q97** *Closed-ended*
10 states became members of the European Union. According to you, are the following countries among them?

| | |
|---|--------------|
| 1 | <i>Yes</i> |
| 2 | <i>No</i> |
| 3 | <i>(DNK)</i> |

| | |
|---|-----------------|
| 1 | <i>Norway</i> |
| 2 | <i>Slovenia</i> |
| 3 | <i>Russia</i> |

Q98 *Closed-ended*

Today 25 states are members of the European Union. What if I tell you that there might be as many as 50 in the future? I Are you very much surprised, rather surprised, little surprised, or not surprised at all by this figure?

| | |
|---|-----------------------------|
| 1 | <i>Very much surprised</i> |
| 2 | <i>Rather surprised</i> |
| 3 | <i>Little surprised</i> |
| 4 | <i>Not at all surprised</i> |
| 5 | <i>(DNK)</i> |

Q99 *Closed-ended*

Do you feel very worried, rather worried, little worried or not at all worried by this figure?

| | |
|---|---------------------------|
| 1 | <i>Very worried</i> |
| 2 | <i>Rather worried</i> |
| 3 | <i>Little worried</i> |
| 4 | <i>Not worried at all</i> |
| 5 | <i>(DNK)</i> |

Q100 *Closed-ended*

To consolidate the European Union do you think that the best solution would be to stop the enlargement process during 20 years?

| | |
|---|--------------|
| 1 | <i>Yes</i> |
| 2 | <i>No</i> |
| 3 | <i>(DNK)</i> |

Q101 *Closed-ended*

[If the answer is yes] Among the most frequently advanced arguments, one says that it is impossible to delay enlargement because the number of conflicts could increase on European borders. Do you consider this argument as appropriate?

- | | |
|---|-------|
| 1 | Yes |
| 2 | No |
| 3 | (DNK) |

Q102 *Closed-ended*

Now that you are aware of this argument, do you still think that the appropriate solution is to stop the enlargement process?

- | | |
|---|-------|
| 1 | Yes |
| 2 | No |
| 3 | (DNK) |

Q103 *Open-ended*

Could you tell me why you are still thinking that the enlargement process should be stopped?

Q104 *Open-ended*

Could you tell me why you are now thinking that the enlargement process should continue?

• **Q105** *Closed-ended*

[If the answer is no] Among the most frequently advanced arguments in the public debate, one says that if there are too many states within the European Union it will become impossible to make decisions. Do you consider this argument as appropriate?

- | | |
|---|-------|
| 1 | Yes |
| 2 | No |
| 3 | (DNK) |

Q106 *Closed-ended*

Now that you are aware of this argument, do you still think that the appropriate solution is to continue the enlargement process?

- | | |
|---|-------|
| 1 | Yes |
| 2 | No |
| 3 | (DNK) |

• **Q107** *Open-ended*

Could you tell me why you are still thinking that the enlargement process should be continued?

Q108 *Open-ended*

Could you tell me why you are now thinking that the enlargement process should be stopped?

Q 109bis

We just mentioned some arguments about the enlargement of the European Union. Do you have in mind other arguments, which may be just as important as these ones?

Q109ter (new)

The argument you just gave is convincing. However, there are important studies that could make you revise your judgement. For instance, the statistical office of the European Union recently produced data that contradict your argument [*“official/expert” argument summed up*]. With this in mind are you still in favour of/against the enlargement process?

[To interviewers: reference and date of the survey, as well as some precise figures ready to be given if asked]

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