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The Cadillac, the mother-in-law, and the ballot: Individual and contextual roots of ambivalence in Swiss direct democracy

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ABSTRACT

Citizens may experience irreconcilable and conflictive values or feelings about a political issue. They may, for instance, both believe in a woman's right to autonomy over her body (*pro choice*) and that human life begins before birth (*pro life*). This conflictive situation – referred to as *ambivalence* in relevant literature – has detrimental effects on political choices. For instance, ambivalence may enhance instability in candidates' evaluations, delay the formation of vote intentions, and finally weaken predictions on vote choices. This being, literature has less looked at what may induce ambivalence, and especially on how informational context may affect it. Our paper aims to compensate for this lack, by assessing under which individual and contextual conditions ambivalence has more chances to be felt by citizens. Through a series of hierarchical estimations based on post-electoral data on Swiss direct democracy and original data retracing content of political campaigns, we will demonstrate that individual determinants (political sophistication, exposure to political campaigns, and heuristics) as well as political campaigning (intensity and negativism) strongly determine the existence of ambivalence.

1. Introduction

Ambivalence exists when someone experiences both positive and negative feeling about an issue (Rudolph and Popp, 2007: 563, Eagly and Chaiken, 1993: 123 sgg.). With appreciable irony, McGraw et al. (2003: 423) compare ambivalence to "watching your mother-in-law drive over a cliff in your new Cadillac": facing a surge of conflicting feelings, you hesitate between run to save your midlife crisis purchase or sit down and enjoy the scenic epilogue for the cause of many conjugal struggles.

An established body of literature explores as of today the nature and extent of ambivalent opinions. Major contributions discuss the presence of ambivalence within opinions concerning issues on abortion or euthanasia (Alvarez and Brehm, 1995, 2002; Steenbergen and Brewer, 2004), social welfare (Feldman and Zaller, 1992; Steenbergen and Brewer, 2004), racial and ethnical inequalities (Alvarez and Brehm, 1997) and gay rights (Steenbergen and Brewer, 2004), or simply competing candidates (Lavine, 2001; McGraw et al., 2003). Current literature seems as of today relatively consensual on the fact that ambivalence has detrimental effects on individual behavior. Ambivalence increases instability in candidates' evaluation (Lavine, 2001; Basinger and Lavine, 2005; McGraw et al., 2003), boosts partisan volatility (Keele and Wolak, 2008; Haddock, 2003), "substantially delays the formation of citizens' voting intentions, diminishes the influence of both personality assessments and issue proximity on summary candidate evaluation, and ultimately weakens the prediction of vote choice" (Lavine, 2001: 916). Recent work by Clark et al. (2008) also shows that ambivalence biases the reception and treatment of new

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information, in that ambivalent individuals tend to avoid "disagreeable" information. Ambivalence has furthermore been shown to discourage political involvement and participation (Mutz, 2002).

The same literature has however astonishingly less to say on what may *cause* ambivalent feelings (but see, e.g., Steenbergen and Brewer, 2004; Rudolph, 2005; Rudolph and Popp, 2007). Furthermore, only little systematic proof exists that what may cause ambivalence comes from different levels simultaneously – Keele and Wolak (2008) being a notable exception. This is precisely the aim of our contribution.

This article explores the roots of ambivalence for Swiss citizens during direct-democratic ballots at the federal level (1999–2005). Following what has been recently done by Keele and Wolak, we will also argue that "while one's propensity to become ambivalent depends in part on individual characteristics, […] the occurrence of ambivalence will also depend on the political environment. Political contexts vary. At times, political information is plentiful, while at other times, political information is scarce" (Keele and Wolak, 2008: 655–656). Ambivalence during direct-democratic ballots in Switzerland signals the fact that some citizens agree with arguments supporting one given proposition but support also arguments opposing it (or disagree with both); we believe that such ambivalent opinions depends on individual characteristics (the level of political sophistication, attention to political information, and the use of heuristics during opinion formation) and the nature and context of political campaigns (intensity and negativism). Based on an "operative measure" of ambivalence (Martinez et al., 2012), our empirical analyses will provide strong support for this assumption.

Switzerland, "the only nation in the world where political life truly revolves around the referendum" (Kobach, 1994: 98), constitutes an excellent field for the study of ambivalent opinions. Because of the particular democratic system, Swiss citizens are often asked to express themselves (via a vote) on policy reforms that cover a vast range of issues; issue opinions – logically more likely to be biased by ambivalence, especially in a limited-information setting – are thus at the heart of the political game. Furthermore, the tradition of Swiss post-ballot analyses (VOX) clearly demonstrates that what citizens feel about some major arguments strongly determines their vote choices, hinting that consistency of opinions predicts vote choices. In such a setting, and even if no systematic research exists (yet), it seems therefore safe to postulate that ambivalent opinions matter. But what are their roots?

Our article structures as follows. We will, firstly, briefly introduce the nature and implications of ambivalent opinions and then, secondly, discuss our expectations related to their multilevel roots. The nature of our research design (data, variables and models) is discussed in the third section; the fourth section presents the empirical test, which will provide consistent support to our expectations, before concluding in the last section.

2. Ambivalent opinions?

Most citizens "appear not to have 'just one attitude' toward political issues" (Zaller, 1992: 54), which implies that "rather than endorsing one side of a political debate and refuting the other, individuals often embrace centrals elements of both sides" (Lavine, 2001: 915). As Alvarez and Brehm (1995) clearly show, citizens may, for instance, cherish arguments that embrace a liberal position on abortion (*pro choice*) while strongly supporting arguments that refer to a conservative and religious view on the issue (*pro life*). In literature on psychology of attitudes, this comes form the fact that "sometimes people simultaneously hold evaluative inconsistent beliefs, that is, some beliefs that express positive evaluation and other beliefs that express negative evaluation" (Eagly and Chaiken, 1993: 123).

The idea that citizens may simultaneously experience both positive and negative feelings towards an issue strongly contrasts with the belief that individual attitudes are unidimensional. This vision "assume[s] a tradeoff between the polar opposite ends of evaluative scales. Focusing on the evaluation of presidential candidates, the more positive a person feels about a candidate, the less negative he must be about that candidate. Or, to use another example, the more conservative an individual is on a policy position, the less liberal she must be. This unidimensional perspective on individual attitudes is prevalent in research on political behavior" (Meffert et al., 2004: 63).

A bi-dimensional evaluative space (Meffert et al., 2004) seems therefore more apt to capture the essence of ambivalent opinions: positive and negative attitudes toward an issue (a candidate, a ballot proposition, etc.) may indeed exist simultaneously. The left scheme of Fig. 1 (adapted from Meffert et al., 2004: 65) presents the relationship between opposite attitudes; the descending diagonal ("reciprocity") represents the unidimensional view of attitudes, where the increasing in favourable attitudes toward an issue leads naturally to a decreasing in unfavourable attitudes towards that same issue. Following this principle, the more we feel positive about a candidate, the less we should experience negative feelings toward him; similarly, the more we agree with a constitutional reform (e.g., through support for a popular initiative), the less we should support arguments opposing it. Strongly contrasting with this postulate, as of today considered as excessively simplistic, the multidimensional approach on attitudes posits that opposite feelings and attitudes can exist simultaneously; this is represented in the left scheme in Fig. 1 with the ascending diagonal ("simultaneity"). The right scheme in Fig. 1 presents four scenarios when negative and positive attitudes come into play. When individuals experience strong positive attitudes toward an issue while experiencing weak negative issues against it, we are in presence of a "positive reciprocity"; a "negative reciprocity" of attitudes exists in the opposite scenario (strong negative attitudes and weak positive attitudes toward an issue). In those two first scenarios, individuals do not experience conflicting attitudes. "Indifference" exists when both positive and negative attitudes are weak; in such a scenario, individuals are simply not that concerned with the issue at stake (Rudolph, 2005). Finally, "ambivalent feelings" exist when individuals experience both strong positive and strong negative attitudes toward an issue.

Ambivalence is often associated in relevant literature to uncertainty and equivocation. Following Alvarez and

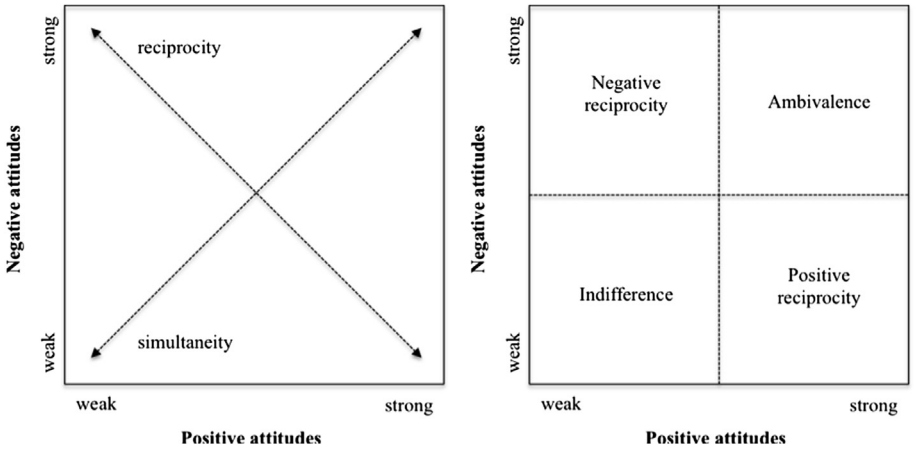

Fig. 1. Bi-dimensional evaluative space. Left figure adapted from Meffert et al., 2004: 65.

Brehm (2002), uncertainty results "when respondents' expectations are not irreconcilable and when additional information reduces response variability" (2002: 58); in other terms, "uncertainty is linked to imperfect and incomplete information in the social choice and game theoretic tradition, and as a characteristic of individuals as the state of being unsure about candidate positions and other political entities" (McGraw et al., 2003: 426). Additionally, equivocation results "when those respondents who have high expectations in two or more areas are even more fixed in their opinions than those who hold high expectations in only one. Equivocal respondents want both expectations (e.g., bureaucracies should be both responsive and equitable), but see no contradiction or trade-off between them" (Alvarez and Brehm, 2002: 58).

It is not our goal to discuss any further the theoretical and normative implications of ambivalence and other close concepts – another relevant example that could be signalled is what some authors refer to as "cognitive dissonance" (e.g., Festinger, 1957; Cooper, 2007); furthermore, we do not dispose of sufficiently fine-grained data to capture such subtleties. What matters to us, is that individuals sometimes can support both positive and negative arguments toward an issue. We will investigate next what may trigger such conflictive opinions.

3. Individually and contextually driven ambivalence: multilevel expectations

Literature on ambivalent opinions remains as of today more prone to discuss its implications on political behavior (e.g., Lavine, 2001; McGraw et al., 2003; Haddock, 2003; Basinger and Lavine, 2005) than to look for its roots. We believe that a more systematic focus on what may induce ambivalence is needed in order to address more efficiently the nature and extent of its consequences. Following Keele and Wolak (2008), ambivalence should be simultaneously triggered by both individual and contextual determinants.

At the individual level, firstly, we believe that citizens with higher levels of sophistications are less inclined to experience opposite opinions. This has been clearly shown by Steenbergen and Brewer (2004: 107), and echoes the underpinnings of Zaller's Receive-Accept-Sample (RAS) model (Zaller, 1992). Following Zaller's RAS model, the higher the level of political sophistication the higher the propensity for reception of political communication ("reception axiom"; Zaller, 1992: 42–44), but also the higher the likelihood for resisting inconsistent information ("resistance axiom"; Zaller, 1992: 44–48). More sophisticated citizens are more likely to acquire political information coming from the elites, but they easily evaluate the directional content of the information received in light of their pre-existing predispositions (i.e., opinions about the issue at stake) and are thus more likely to resist incongruent information. This should lead to an increasing of consistent beliefs, hence reducing the likelihood for ambivalence. Therefore:

H1. The higher the level of individual sophistication for a given citizen, the lower its likelihood for ambivalence.

Being attentive to information from the political elites increases for individuals the likelihood that such information is integrated within their framework of beliefs and opinions (Zaller, 1992). Given that such information during decisional tasks is often heterogeneous (Keele and Wolak, 2008), we may expect that those individuals that are more attentive to political information coming from the elite are more subject to integrate contradictory arguments. At the individual level, this means that those who are more exposed to political campaigns before the ballot have a greater likelihood to experience ambivalent opinions. In fact, "heighten exposure to competing arguments, particularly arguments that challenge one's initial position, has the potential to create internalized conflict in judgment situations. This internalized conflict is, in turn, thought to engender ambivalence toward a given set of issues or figures" (Rudolph, 2011: 562). Exposure to political campaigns may take two forms, an active and a passive one. In an active way, citizens may decide to voluntarily expose themselves to a higher flux of information by consulting

different information sources during opinion formation. Intuitively, those who read political articles in newspapers, watch political debates on TV, listen to radio broadcasts on the issues at stake, and frequently consult political blogs in order to form their opinion are more likely to be confronted to a wider range of conflicting and contradictory arguments supporting and opposing a given proposition than those who only read newspapers. Then, in a passive way, we may imagine that those who take their final decision in a very late moment have been more heavily exposed to political information than those who have taken their decision very early. In other terms, the more you wait to fix your choice, the higher the likelihood that you will be exposed to political information, thus the higher the likelihood that you will be exposed to inconsistent and contradictory information, hence the higher the chances that you will experience ambivalent opinions. Therefore:

H2. the higher the exposure to political information (higher use of information sources, later decision) for a given citizen, the higher its likelihood for ambivalence.

Finally, still at the individual level, we may imagine that those who take their decision not though reasoning and systematic processing of information (Eagly and Chaiken, 1993) but instead through the activation of referential heuristics are more likely to experience ambivalent feelings. Heuristics are "judgemental shortcuts, efficient ways to organize and simplify […] choices, efficient in the double sense of requiring relatively little information to execute, yet yielding dependable answers even to complex problems of choice" (Sniderman et al., 1991: 19). "Referential" heuristics represent a specific sub-set of judgemental shortcuts, in which individuals align their opinion on those of political elites they feel close to (or they have a high trust in; Nai and Lloren, 2009). Confronted to complex choice situations, some citizens do not dispose of the cognitive tools needed to properly acquire, scrutinize and sort the relevant (and consistent) information form the maelstrom of information they are exposed to; in order to achieve a satisfactory decision, they choose to vote as their preferred party tells them to vote (partisan heuristic), or as the government instructs them to vote (trust heuristic).

Recent literature shows that, in electoral situations, citizens that activate referential heuristics (and especially partisan voters) are *less* likely to experience ambivalence (e.g., Rudolph, 2005; Rudolph and Popp, 2007; Rudolph, 2011). The reason behind this effect is that partisan reasoners "apply their reasoning power in defense of a prior, specific conclusion" (Taber and Lodge, 2006: 756), which means that they are more likely "to seek out and accept attitudinal congruent arguments than those that are attitudinally incongruent" (Rudolph, 2011: 563). In other terms, partisan voters tend to resist information and arguments that go against their partisan predispositions, hence decreasing risks of ambivalence.

We do not believe that such argument is accurate. Being able to evaluate new information in light of one's own partisan predispositions (while discarding inconsistent information) presupposes a comprehensive understanding of information dynamics, and demands a systematic evaluation of new information in light of its ideological content. This clearly requires high levels of sophistication (Eagly and Chaiken, 1993; Petty and Cacioppo, 1986), which is reasonable not to expect among those who activate simplifying strategies (such as referential heuristics; Nai, 2013b). Those citizens cast a clear vote which is easily retrieved, but probably do not dispose of the cognitive tools to reject inconsistent arguments; this implies that they are more easily subject to inconsistent evaluation of information, which increases the likelihood that they may experience ambivalent opinions. Therefore:

H3. likelihood for ambivalence is higher among those citizens who activated referential heuristics (i.e., partisan and trust heuristics) during opinion formation.

Roots for ambivalence are not only to be found at the individual level. If individual reception of information (exposure, ability to resist, etc.) may be anticipated to affect ambivalent opinions, as discussed, the nature of information itself should have similar effects. We believe that this has to be addressed in a twofold way, i.e., regarding the amount of information (intensity) and the tone of that same information.

Firstly, following what has been discussed at the individual level, higher amount of information provided by the political elite should increase the likelihood for ambivalence. More intense campaigns provide more information about the issues at stake, and create more favourable conditions for individuals to be confronted with inconsistent arguments (Keele and Wolak, 2008: 656). Or, as Alvarez and Brehm (2002: 58) illustrate, "in a state of conflict between predispositions, information may heighten, not reduce, the conflict". Furthermore, more intense campaigns encourage citizens to take into account a wider range of arguments and issues: "intense campaigns can stimulate personal interest, attentiveness, a sense of accountability, and a sense of uncertainty. They can make citizens feel something personal is at stake […]. Intense campaigns should encourage citizens to weight pros and cons, to think open-mindedly" (Kam, 2006: 933), which might lead to ambivalence (Kam, 2006: 934; Rudolph, 2011: 563). Therefore, we logically have:

H4. the higher the amount of political information (campaign intensity) citizens are confronted to, the higher their likelihood for ambivalence.

We however believe that reducing political information solely to its amount leads to a narrow and probably simplistic view on campaign effects on cognitive and political behavior. Decades of research on campaign effects have indeed shown that campaign content and tone have to be taken into account. The content of political information, in terms of what arguments are provided and how those arguments are rhetorically framed, has been shown, e.g., to affect persuasion (Mutz et al., 1996), to frame citizens' preferences and opinions (Iyengar and Simon, 1993), to affect the quality of citizens' opinions (Nai, 2013c), to directly affect turnout at ballots and elections (Ansolabehere et al., 1994; Finkel and Geer, 1998; Nai, 2013a), to have a direct incidence on citizens' cynicism

towards political elites (Thorson et al., 2000), and eventually to affect citizens' decisions and vote outcomes.

We focus here on a specific aspect of a campaign's rhetoric content: its *tone*, i.e., the level of negativism carried through political campaigning (Ansolabehere and Iyengar, 1995; Ansolabehere et al., 1994; Finkel and Geer, 1998; Freedman and Goldstein, 1999; Ansolabehere et al., 1999; Lemert et al., 1999; Lau and Pomper, 2002, 2004; Martin, 2004; Jackson and Sides, 2006; Stevens, 2009; Nai, 2013a).

Although no clear consensus emerges from this literature on the effects of negativism on turnout (Lau et al., 1999; Lau and Pomper, 2002, 2004; Lau et al., 2007; Stevens, 2009), some stressing a demobilization effect (e.g., Ansolabehere and Iyengar, 1995; Ansolabehere et al., 1994, 1999; Lemert et al., 1999), whereas others highlighting stimulation effects (e.g., Finkel and Geer, 1998; Freedman and Goldstein, 1999; Geer, 2006; Crigler et al., 2006), at last one issue seems more widely accepted: negativism may certainly discourage some citizens to participate, but increases the saliency of the issue for those who decide to turnout. In such a situation, negativism show that issues at stake are worthwhile, which is another way to say that negativism should increase interest in the political campaign. For those who participate negativism is an efficient information source during opinion formation (Crigler et al., 2006; Nai, 2013c), which means that citizens are more likely to be attentive to more negative campaigns.

To sum up, we believe that negativism shows citizens that they have to pay attention to what is said (Geer, 2006). If they are more attentive, they will therefore be more exposed to information carried by those campaigns, which in turn should increase the likelihood that they experience ambivalent opinions. We have therefore:

H5. The higher negativity of political information citizens are confronted to, the higher their likelihood for ambivalence.

4. Research design: Swiss direct-democracy under the magnifying glass

Our goal here is to explain the presence of ambivalent opinions within Swiss citizens about projects voted in federal ballots in Switzerland. We postulate that ambivalence may be both individually and contextually driven. We provide special attention to two sets of explanatory factors. At the individual level, we believe that ambivalent opinions are affected by the level of political sophistication, the attentiveness to political campaigns, and the heuristics activated by citizens during opinion formation. At the contextual level, we believe that ambivalence is strongly influenced by the nature and tone of political campaigns about the projects voted during federal ballots (intensity and negativity). Our paper covers all projects voted in Switzerland ad the federal level between 1999 and 2005 (75 projects). Individual variables come from a series of representative post-ballot surveys conducted in Switzerland (VOX data; see, e.g., Nai and Sciarini, 2011). Our individual database merges 75 individual datasets (one for each project submitted to popular vote between 1999 and 2005), and contains thus information about vote behavior for 77,766 citizens.

Our dependent variable is the presence of ambivalent opinions concerning the project submitted to vote. Ambivalence exists when someone accepts or supports arguments both in favour and against a given issue (a candidate, a project voted; Rudolph and Popp, 2007: 563, Eagly and Chaiken, 1993: 123 sgg.). In line with what suggested by Martinez et al. (2012), we will rely on an "operative measure" of ambivalence,[1] i.e., "based on questions that trace evidence of attitude conflicts" (Martinez et al., 2012: 242), in which the strategy is "to ask respondents for their separate positive and negative feelings about an issue […] and to regard those who offered a mix of both as ambivalent" (Martinez et al., 2012: 314; see also Thompson et al., 1995).

In our data (VOX), a battery of questions asks respondents to position themselves on a list of campaign arguments; respondents are confronted both to favourable arguments concerning the project voted (i.e., reasons to accept it) and unfavourable arguments (reasons to reject it). For each of those arguments, respondents have to signal their agreement on a scale ranging from "strongly disagree" (−2) to "strongly agree" (2).

Following Lavine (2001), two conditions have to be met in order to qualify an opinion as ambivalent: "first, the conflictual (positive and negative) reactions to the attitude object should be similar in magnitude. As one component becomes stronger than the other […] the attitude should polarize toward positivity or negativity, thereby reducing ambivalence. Second, ambivalence would seem to require that the positive and negative components be of at least moderate intensity. Thus, ambivalence should be greater when voters have several positive and negative reactions […] than when they have only one positive and one negative reaction" (Lavine, 2001: 918). Our measure takes into account those two conditions, and is computed as follows: firstly, for a given respondent, we measure the general level of agreement (or disagreement) with the pro and con arguments, through two additive scales ranging from −6 (strongly disagrees with arguments) to 6 (strongly agrees with arguments); secondly, we combine the two variables in an additive variable in order to detect ambivalent feelings. The new variable ranges from −12 (strongly disagrees with both pro and con arguments) to 12 (strongly agrees to both); by taking into account the absolute value on this additive scale we obtain a final variable that ranges from 0 (no ambivalent opinions) to 12 (highest ambivalence).[2] The share of respondents across the different levels of ambivalence is quite in line with the US literature (Lavine, 2001: 921; Meffert et al., 2004: 69; Steenbergen and Brewer, 2004: 105).

We measure sophistication through a factor analysis on five – highly correlated – variables: issue-related factual knowledge, interest in politics, difficulties during opinion formation, and perceived importance of the project (both for the citizen and for the country).

[1] Opposed to "subjective measures" obtained by "asking respondents to 'self diagnose' their own attitude state" (Martinez et al., 2012: 240). Those measures probably suffer of an excessive lack of internal validity.

[2] See the Appendix for more details on our measure of ambivalence.

Issue-related factual knowledge is measured through two questions, one asking to retrieve the exact title of the project submitted, and the other to briefly explain its content; to each exact answer one point is attributed, which produces a 0–2 variable where 2 points signal the highest knowledge. Interest in politics is measured through a 0–3 ordinal variable (from "not interested at all" to "highly interested"). The presence of difficulties is measured through a direct question, which produces a binary variable in VOX data (absence/presence of difficulties). Finally, perceived importance of the project (both for the citizen and for the country) is measured through a 0–10 scale variable (10 signals the higher level of perceived importance of the project). Perceived importance of the project act as an excellent proxy for the measure of "need for cognition" (Nai and Lloren, 2009), which might be defined as "an individual's tendency to engage in and enjoy effortful cognitive endeavours" (Cacioppo et al., 1996: 197).

The first dimension extracted through factor analysis (principal components) on those five variables explains 34% of the variance (KMO = .55***), and is used in our models as the principal measure of political sophistication. An additional model showing the direct effect of those five variables on ambivalence will however be provided.

Exposure to political information is measured through two variables: first, in VOX data a series of questions measure the respondents' intensity of media use during opinion formation. We discriminated between citizens having performed a high information search, and those with a lower information search. In our data, respondents declared having consulted an average of 5.4 information sources during opinion formation. High information search exists when 6 or more different sources have been consulted. Second, the moment of the final choice is directly measured through a question in VOX data; the variable discriminates between 5 moments, from "very early decision" (choice was clear since the beginning) to "very late decision" (final choice taken less than a day before the ballot).

The use of referential strategies is deducted indirectly, since no direct measure of the cognitive behaviour exists in VOX data (both measures are thus *proxies* of cognitive behaviour). When strength of party affiliation is high, a vote identical to the instruction provided by the closest party signals a partisan heuristic (Kriesi, 2005; Nai, 2013b; McClurg and Sokhey, 2008). Similarly, when trust in government is high, a vote identical to the government's instruction signals a trust heuristic (Kriesi, 2005; Nai, 2013b).

Contextual variables are measured through an original dataset allowing retracing the content of political campaigns before Swiss ballots at the federal level (Nai, 2013a, 2013b). Data was retrieved through structured content analysis on political ads found in the press before the voting. For 1999–2005, we collected all political ads published in six major Swiss journals[3] during the month before ballot. About 7200 ads were used to build our indicators.

Two campaign dimensions are used here: intensity and negativism. The intensity of political campaigns deals with the quantitative coverage of the campaign. Intense campaigns cover higher amounts of the public space, which means that the quantity of information available on a given topic is bigger. The intensity of the campaign is measured through the cumulative size of ads (in cm^2) found in the press for a specific campaign. Negative campaigning measures the relative presence of attacks toward political adversaries in political ads composing campaigns. The level of negative campaigning is simply computed by attributing one point to each ad containing one or more explicit and personal attacks toward political adversaries. Attacks toward the *position* of political adversaries do *not* count as negative campaigning, given that the nature of direct democratic campaigns is precisely to criticize the opponents' ideas and issues (Nai, 2013a). The value for each campaign is simply the percentage of ads containing direct and personal attacks (Nai, 2013a, 2013b). Both variables are standardized in our models in a continuous 0–1 range.

Models are controlled by age, gender and education at the individual level, and by the project's instrument (popular initiative, optional referendum, mandatory referendum[4]) and political issue[5] and party coalitions[6] at the contextual level.

5. Results

Table 1 presents seven empirical models that explain the presence of ambivalent opinions (continuous variable ranging from 0 to 12, where 0 measures the minimal and 12 the maximal level of ambivalence). The first three models contain only independent variables at the individual level; Model 1a is based on the level of sophistication (plus controls), Model 1b tests for the direct effect of the five

[3] Tribune de Genève, Le Temps (French), Neue-Zürcher Zeitung, Tages-Anzeiger (German), Regione, Giornale del Popolo (Italian). Those journals efficiently cover the Swiss newspapers panorama, both in terms of quantitative presence and ideological orientations.

[4] The *popular initiative* allows for a total or partial revision of the Constitution (and not a Law) and generally takes the form of a formulated draft. Launching a popular initiative requires 100,000 signatures. To be accepted the initiatives require a double majority of both the people and the 26 cantons forming the Swiss federal system. Additionally, two types of referenda exist: a *compulsory referendum* is required for each revision of the Constitution proposed by the government and the Parliament, the entry into international organizations and certain urgent laws. In order to be adopted, constitutional amendments that are submitted to citizens in the form of compulsory referenda also require a double majority of both the people and the cantons; finally, 50,000 citizens or eight cantons may launch an *optional referendum* against federal laws, urgent statutes exceeding one year of validity or, under certain conditions, international treaties. This optional referendum requires only a simple majority of the people in order to succeed.

[5] Policy reforms on which Swiss citizens are asked to vote cover a vast range of issues. Among all the possible issues, those related to international and security policies (in which we also consider all issues related to Swiss army, peace building, and immigration; Kriesi, 2005: 36) and energy, environment and land use are the most salient for Swiss citizens (Nai, 2013b). It has to be noted that we ran a series of additional robustness checks with the inclusion of other issues (for instance, on welfare state and redistribution policies); those additional models yield almost identical results (available upon request).

[6] More specifically, we take into account the two most conflictive coalitions: left (Social-Democrats) vs all other major parties, and conservative right (Swiss People's Party) vs all other parties.

Table 1
Multilevel determinants of ambivalence (continuous variable).

Multilevel determinants	M1a	M1b	M2	M3a	M3b	M3c	M4
	Coeff. (S_e)	Coeff. (S_e)	Coeff. (S_e)	Coeff. (S_e)	Coeff. (S_e)	Coeff. (S_e)	Coeff. (S_e)
Intercept	3.05 (.12)***	3.57 (.17)***	2.81 (.12)***	2.37 (.23)***	2.30 (.28)***	2.54 (.23)***	2.37 (.24)***
Level-1 variables (individuals)							
Sophistication	−.18 (.05)***	.	−.24 (.06)***	−.24 (.06)***	−.25 (.06)***	−.25 (.06)***	−.21 (.04)***
Knowledge	.	−.23 (.05)***	.	.	.	.	.
Interest in politics	.	.05 (.02)	.	.	.	.	.
Difficulties during opinion formation	.	.11 (.06)	.	.	.	.	.
Importance of the project (for country)	.	−.04 (.02)*	.	.	.	.	.
Importance of the project (for myself)	.	−.01 (.01)	.	.	.	.	.
Information use (ref: low use)	.	.	.23 (.06)***	.23 (.06)***	.23 (.06)***	.23 (.06)***	.23 (.06)***
Moment of choice	.	.	.03 (.02)	.03 (.02)	.03 (.02)	.03 (.02)	.04 (.01)*
Partisan heuristic	.	.	.31 (.06)***	.31 (.06)***	.31 (.06)***	.31 (.06)***	.28 (.06)***
Trust heuristic	.	.	.23 (.07)***	.23 (.07)***	.23 (.07)***	.23 (.07)***	.21 (.07)**
Education	−.09 (.02)***	−.10 (.02)***	−.10 (.03)***	−.10 (.03)***	−.10 (.03)***	−.10 (.03)***	−.10 (.03)***
Age	.08 (.01)***	.07 (.01)***	.07 (.01)***	.07 (.01)***	.07 (.01)***	.07 (.01)***	.07 (.01)***
Sex (ref: female)	.01 (.03)	.02 (.04)	.04 (.04)	.04 (.04)	.04 (.04)	.04 (.04)	.03 (.04)
Level-2 variables (context)							
Intensity of political campaign	.	.	.	−.44 (.40)	−.35 (.34)	.	.01 (.37)
Intensity (no campaigns)	.	.	.	.	.	−.25 (.56)	.
Intensity (yes campaigns)	.	.	.	.	.	−.51 (.35)	.
Negativism in political campaign	.	.	.	.36 (.37)	.06 (.46)	.	−.01 (.42)
Negativism (no campaigns)	.	.	.	.	.	.62 (.45)	.
Negativism (yes campaigns)	.	.	.	.	.	.65 (.72)	.
Instrument[a]: Popular initiative	.	.	.	.44 (.25)†	.61 (.42)	.29 (.24)	.47 (.25)†
Instrument: Optional referendum	.	.	.	.30 (.21)	.37 (.23)	.17 (.25)	.33 (.21)
Issue[b]: Int'l and security policies	.	.	.	.10 (.26)	.08 (.28)	−.11 (.27)	.11 (.26)
Issue: Energy, environment, land use	.	.	.	.42 (.26)	.44 (.27)	.40 (.24)†	.40 (.25)
Party coalition (yes): left vs other	.	.	.	.	−.25 (.45)	.	.
Party coalition (yes): conserv. right vs other	.	.	.	.	.34 (.57)	.	.
Crosslevel interactions							
Sophistication*intensity	.	.	.	.	.	.	−.49 (.20)*
Sophistication*negativism	.	.	.	.	.	.	−.11 (.17)
Information use*intensity	.	.	.	.	.	.	.04 (.16)
Information use*negativism	.	.	.	.	.	.	.17 (.26)
Moment of choice*intensity	.	.	.	.	.	.	−.25 (.04)***
Moment of choice*negativism	.	.	.	.	.	.	.12 (.04)**
Partisan heuristic*intensity	.	.	.	.	.	.	.30 (.25)
Partisan heuristic*negativism	.	.	.	.	.	.	.10 (.17)
Trust heuristic*intensity	.	.	.	.	.	.	−.14 (.28)
Trust heuristic*negativism	.	.	.	.	.	.	.51 (.23)*
Interclass correlation	$\rho = .05$	$\rho = .05$	$\rho = .05$	$\rho = .05$	$\rho = .05$	$\rho = .05$	$\rho = .05$
N (level-1)	58,576	58,576	58,576	58,576	58,576	58,576	58,576
N (level-2)	57	57	57	57	57	57	57

Note: Dependent variable is the presence of ambivalence (continuous variable). Models with fixed effects (with robust standard errors), run with HLM 6.06 through Restricted Maximum Likelihood estimations. Intensity and negativism variables grand centred.
*$p < .05$, **$p < .01$, ***$p < .001$, †$p < .1$ (level-2 variables only).
[a] Reference category for juridical instrument: mandatory referendum (+counter projects).
[b] Reference category for issue: other issues.

components of political sophistication (knowledge, interest, difficulties, perceived importance of the project for the country and for the citizen himself), whereas Model 2 introduces heuristics activated by citizens during opinion formation (partisan and trust heuristics) and two variables on exposure to political information (use of information sources and moment of choice). The four last models integrate contextual variables (intensity and negativism), first directly (Model 3a, 3b and 3c), then in crosslevel interaction with the most relevant individual variables (Model 4). Model 3a builds up with the direct effect of campaign dimensions (intensity and negativism) as a whole, whereas model 3c discriminates between both dimensions for YES (defending policy changes) and NO (defending the status quo) campaigns. Model 3b adds the partisan coalitions as controls.

Campaign variables (intensity and negativism) are entered in our models as grand centred, which means that a variable's effect is computed for those variables fixed at their average value. Significance in our models have to be interpreted cautiously: the very high number of observations at the individual level considerably reduces probability of errors for level-1 variables; inversely, the smaller number of contextual observations (i.e., the projects submitted between 1999 and 2005) makes that effects are less easily significant.

The first clear result that emerges from Table 1 is that the higher the level of political sophistication, for a given citizen, the lower the likelihood to experience ambivalent opinions toward the project voted. The effect for sophistication (our PCA-extracted dimension, see above) on ambivalence is significant at $p < .001$ and negative; this is the case for the first model (M1a), where sophistication is the only independent variable (with socio-demographic controls), but remains true as well for all the other models where all other independent variables (both at the individual and the contextual level) are added; this suggests that the effect found for sophistication on ambivalence is robust, and strongly confirms our first expectation (H1): higher political sophistication means a higher access to political information during opinion formation, but does also prevent citizens from being biased by information that is inconsistent with their previous beliefs and predispositions. This provides additional (although indirect) confirmation to Zaller's "resistance axiom" (Zaller, 1992: 44–48): sophisticated citizens do indeed possess the cognitive skills needed to sort information accordingly to their predispositions, which lowers the chances for them to support contradictive campaign arguments.

Model 1b provides the direct effect on ambivalence of the five components of political sophistication (knowledge, interest, difficulties, perceived importance of the project for the country and for the citizen himself). Results go overall in the same direction as for the global sophistication variable, but only knowledge has a sensible effect. Furthermore, the model is slightly biased by multicollinearity (the five variables are strongly correlated). All remaining models will thus be based on the PCA-extracted dimension for sophistication.

Our second hypothesis (H2) is also confirmed, in that being more exposed to political information, *Ceteris paribus* (e.g., for low levels of sophistication), increases the likelihood for ambivalence. This is true for both passive and (especially) active exposure to political information (Model M2). Firstly, those who did take their final decision in a later moment were more likely to be exposed to political messages (high passive exposure), whereas those who had their final choice clear in mind from the beginning has less reasons to pay attention to political communication and propaganda (low passive exposure); a high passive exposure increases the chances that inconsistent political information is received (since the final choice has still not yet be taken), hence increasing the likelihood for ambivalence. The effect for passive exposure (moment of choice) on ambivalence is however quite weak, and (slightly) not significant at the $p < .05$ level. Secondly, those who did experience a higher consumption of information sources (high active exposure) were *de facto* more likely to be exposed to political information than those who did consult only a few information sources (low active exposure); high active exposure directly increases the chances that individuals are exposed to inconsistent information, hence increasing ambivalence, *ceteris paribus*. The effect for active exposure (information use) on ambivalence is significant at $p < .001$ and quite strong.

The use of referential strategies during opinion formation also strongly and significantly increases the likelihood for ambivalence (Model M2), which confirms our third hypothesis (H3). Citizens activate referential strategies (partisan and trust heuristics) during opinion formation in order to overcome political tasks that are perceived as excessively complex. Facing choices that require an excessively high cognitive commitment, individuals often prefer to simplify their task: "people prefer less effortful to more effortful modes of information processing. Heuristic and systematic processing are both presumed to serve the accuracy-motivated goal of assessing message validity […] but the least effort principle holds that people often shun systematic processing in favour of the less effortful heuristic mode. […] The heuristic-systematic model's sufficiency principle embodies the idea that efficient information processors must strike a balance between satisfying motivational concerns and minimizing their processing efforts" (Eagly and Chaiken, 1993: 330; see also Chen and Chaiken, 1999: 74). Referential shortcuts are activated by those citizens that follow the cues provided by the political elite they feel close to (partisan heuristic) or they highly trust (trust heuristic). Those who choose not to choose (i.e., those who align their decision to some external cues), so to speak, are provided with clear decisions; this being, the cognitive framework that supports their decision is at best weak. Given that they did not assess the validity of their decision through a systematic treatment of information (keeping the relevant information and discarding the inconsistent cues and arguments), the risk for them to accept information inconsistent with their beliefs and predispositions is high; the face therefore a higher risk of ambivalence. The effects for both heuristics on ambivalence are significant (at $p < .001$) and quite strong.

Effects for exposure to information (moment of choice and information use) and referential strategies (partisan and trust heuristics) are stable across our models, even when contextual variables are entered.

In a nutshell, all hypotheses at the individual level find a quite strong support in our results: ambivalence decreases for higher levels of sophistication (H1), and increases for higher exposure to political information (especially active; H2) and when citizens form their opinion through referential strategies (partisan and trust heuristics; H3).

Controls at the individual level show that ambivalence decreases with the increasing in education levels (which makes sense, given that education is often considered as a proxy for sophistication), and slightly increases with age (as found, e.g., by Steenbergen and Brewer, 2004: 107). Sex does not affect ambivalence in any significant way.

Models M3a to M4 introduce contextual variables. Those models show the only counterintuitive effect found. We expected ambivalence to climb with the increasing in campaign intensity. More intense campaigns provide higher volumes of information on and about the issue at stake, and hence increase the chances that citizens are confronted with inconsistent information (which should induce ambivalence). We already confirmed at the individual level that being more exposed to political information (both actively and passively) increases ambivalence. Our results for campaign intensity show however a different picture. Following results presented in Table 1 (all models from M3a to M4), ambivalence *declines* with the increasing in campaign intensity, *ceteris paribus*. We find hard to make sense of such effect, but we may imagine that what really induces ambivalence is not the amount of information but instead its nature (results for negativism, discussed below, will confirm this idea). Individuals that are more heavily exposed to information, both by using more information sources (active exposure) or by delaying their final choice (passive exposure) are more likely to show ambivalent opinions; at the individual level, this means that being exposed to higher amounts of information increases the likelihood that inconsistent information is assimilated. This does however not mean that an increasing in the amount of information provided to citizens directly enhances ambivalence (quite the opposite, following our results). Information use and moment of choice are not correlated with campaign intensity, which means that what really matters is not how much information you may choose from, but if and how you decide to be exposed to it (passively and actively).

Furthermore, more intense campaigns carry more sophisticated arguments (i.e., arguments supported with in depth-discussions and justifications; Nai, 2013b); this means that during very intense campaigns citizens are indeed confronted with a wider range of (potentially inconsistent) information, but that they are also provided with the logical and argumentative tools for pick consistent over inconsistent information (hence reducing ambivalence).

It is worthily to note that such effect for intensity exists also when we control for the partisan coalition at work (Model M3b), and even if we decompose the campaign by taking into account its direction (Model M3c). This last model ensures to control for the fact that the relative share of information (i.e., the ratio between the campaigns defending and those opposing the proposed reform) might effect ambivalence; it does not, in that the direct effect of the YES and NO components in Model M3c is quite similar to the one showed for the "whole" campaign in Model M3a.

Table 1 shows then that the tone of political information in terms of negativism affects ambivalence as expected (H5): the higher the level of negative information provided to citizens, the higher the chances that they will experience ambivalent feelings. The effect for negativism on ambivalence in all remaining models (M3a to M4) is positive. This result may provide additional confirmation that negative political information increases citizens' attention and interest in the political campaign. Negativism acts as a cue for citizens, delivering the message that the issues at stake are worthwhile, and shows citizens that they have to pay attention to what is said (Geer, 2006). If they are more attentive, they will be more exposed to information carried by those campaigns, which in turn enhances ambivalence. Our results highlight that, at the individual level, higher exposure to political information increases ambivalence; at the contextual level, however, what seems to increase citizens' interest (hence exposure, and then ambivalence) is not the amount of information provided, but its tone (here measured through negativism).

As for intensity, this effect is stable for the decomposed campaign by its direction (Model 3c), but is sensibly weaker once we take into account partisan coalitions (Model M3b).

The final model in Table 1 (M4) introduces crosslevel interactions, i.e., interactive effects between variables at different hierarchical levels (individual and contextual variables). The model shows only some interesting effects.

Firstly, ambivalence is reduced when campaigns are intense for more sophisticated voters (which makes sense), but also for late voters: more intense campaigns do provide more robust and better justified arguments (Nai, 2013b), which counters the negative effect on attitudinal consistency driven by higher passive exposure (late decision).

This being, secondly, even more intense campaigns (i.e., campaigns with better arguments) are not able to reduce ambivalence among citizens that vote accordingly to a trust heuristic.

Thirdly, and finally, a strong and positive effect on ambivalence exists for those citizens having simplified their choice through a trust heuristic when campaigns are highly negative. In such situation, their attention to political information is higher, and they do not possess the cognitive tools to pick consistent over inconsistent information (which increases ambivalence).

6. Discussion

When facing political choices (a candidate to elect, a decision to take on a ballot proposal), citizens find themselves into a complex crossfire situation: they have to combine their attitudinal predispositions (their beliefs – often embryonic – on the issues at stake) with the almost necessarily conflictive information they are submitted to through political campaigning. When asked about their opinions on the issue at stake, it comes then as no surprise than often citizens show inconsistent attitudes. Attitudes inconsistency exists when a given individual experiences both positive and negative feeling about an issue: he may for instance strongly agree that death penalty has to be abolished due to inhuman treatment for its victims and because of the many judicial mistakes that occurred over the centuries, but at the same time strongly support that particularly nasty crimes require death penalty. In political behaviour literature, we refer to such conflictive opinions as "ambivalence" (Lavine, 2001; McGraw et al., 2003; Rudolph and Popp, 2007).

Recent literature shows that ambivalence has detrimental effects on individual behavior (e.g., Lavine, 2001; McGraw et al., 2003; Haddock, 2003; Basinger and Lavine, 2005; Keele and Wolak, 2008). Ambivalence "creates instability in candidate evaluations, substantially delays the formation of citizens' voting intentions, diminishes the influence of both personality assessments and issue proximity on summary candidate evaluation, and ultimately weakens the prediction of vote choice" (Lavine, 2001: 916). The same literature has however less to say on what may cause ambivalent feelings. This was precisely the aim of our contribution.

This article assessed the roots for individual ambivalence during direct-democratic ballots at the Swiss federal level. Between 1999 and 2005, period for which he dispose of empirical measures on the evolution and tone of direct-democratic campaigns, 75 different projects were submitted to Swiss citizens. They had, of course, to decide whether or not to support them, but this was of little interest for us here. Numerous studies already dealt with the reasons behind voting choices during direct-democratic ballots (e.g., Marquis 2006; Kriesi, 2009). What really mattered for us was that a significant share of those citizens experienced ambivalent feelings towards the projects voted. Those citizens agreed with arguments supporting one given proposition but supported also arguments opposing it (or disagreed with both).

Our empirical analyses questioned the reasons behind such conflictive opinions, by taking into account both individual and contextual determinants, and showed significant support for our expectations.

Our results showed that political sophistication, exposure to political information and the use of heuristics during opinion formation strongly affect ambivalence.

Firstly, as expected, the higher the level of political sophistication, for a given citizen, the lower the likelihood to experience ambivalent opinions toward the project voted during the ballot; higher political sophistication means a higher access to political information during opinion formation, but does also prevent citizens from being biased by information that is inconsistent with their previous beliefs and predispositions. We argued that this provides additional (although indirect) confirmation to Zaller's "resistance axiom" (Zaller, 1992: 44–48): sophisticated citizens do indeed possess the cognitive skills needed to sort information accordingly to their predispositions, which lowers the chances for them to support contradictive campaign arguments.

Secondly, as expected, being more exposed to political information, *ceteris paribus* (e.g., for lower levels of sophistication), increases the likelihood for ambivalence. This is true for both passive exposure (later final decision, which enhances the chances that inconsistent political information is received) and active exposure (higher use of information sources, which exposes *de facto* citizens to political information).

Thirdly, as expected, the use of referential strategies during opinion formation strongly increases the likelihood for ambivalence. Recent literature showed that citizens that activate referential heuristics (and especially partisan voters) are *less* likely to experience ambivalence (e.g., Rudolph, 2005; Rudolph and Popp, 2007; Rudolph, 2011). This literature argues that partisan voters activate defensive mechanisms to reject counterattitudinal information and arguments (Taber and Lodge, 2006: 756; Rudolph, 2011: 563), hence decreasing risks of ambivalence. We disagreed with such argument. Being able to evaluate new information in light of one's own partisan predispositions and discard inconsistent information presupposes a comprehensive understanding of information dynamics, which clearly requires high levels of sophistication (Eagly and Chaiken, 1993; Petty and Cacioppo, 1986). Heuristics voters cast a clear vote which is easily retrieved, but probably do not dispose of the cognitive tools to reject inconsistent arguments; they are probably more easily subject to inconsistent evaluation of information, which increases the likelihood for ambivalence. Our analyses provided strong support for this argument.

Roots for ambivalence strongly depend on individual attitudes and characteristics, but also on the evolution and content of the discursive context under which citizens form their opinion. Two dimensions of political campaigns were considered in our analyses: the quantitative coverage of the campaign (intensity), and its tone (the negativism carried by the campaign).

Our results show, firstly, that intensity does unexpectedly *not* increase ambivalence. We expected ambivalence to climb with the increasing in campaign intensity. More intense campaigns provide higher volumes of information on and about the issue at stake, and hence increase the chances that citizens are confronted with inconsistent information (which should induce ambivalence). Our results showed the opposite effect. In order to make sense of this counterintuitive result, we argued that what really matters is not the amount of information carried through political campaigns, but its tone. More intense campaigns carry more sophisticated arguments (i.e., arguments supported with in depth-discussions and justifications; Nai, 2013b); this means that during very intense campaigns citizens are indeed confronted with a wider range of (potentially inconsistent) information, but that they are also provided with the logical and argumentative tools for pick consistent over inconsistent information (hence reducing ambivalence).

Our results demonstrated, secondly, that the higher the level of negative information provided to citizens, the higher the chances that they will experience ambivalent feelings. This result may provide additional confirmation that negative political information increases citizens' attention and interest in the political campaign. Negativism delivers the message that citizens have to pay attention to what is said (Geer, 2006). If they are more attentive, they will be more exposed to information, which in turn enhances ambivalence. Once again, what really matters is not the amount of information, but its tone.

Roots of ambivalent opinions have hence to be found both at the individual and the contextual level, which confirms our initial intuition. This conclusion is not only purely anecdotic. It clearly shows that political information shapes not only the behavior of those who are confronted with it, as largely confirmed in the literature, but also their opinions about the issues at stake. Political campaigns inform, argue on and about the voting choices, and try to persuade citizens on the validity of the propositions conveyed (a candidate to choose, a project to support or reject). Individual opinions – and their consistency – strongly depend on the citizens' characteristics. Our analyses provide clear confirmation that attention to political campaigns also strongly matters for

citizens' opinions, as does the nature and tone of the political information carried by those campaigns. All in all, this means quite simply that what you do and what you think depends on who you are, but also on what you get.

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Appendix

This appendix contains two sections. The first presents precise details on how to measure ambivalence with our data (and with similar data), to ensure replication. The second presents the results of additional analyses (with an alternative measure of ambivalence), to ensure robustness of our models. The third section, more general, introduces the precise wording of the survey questions used in our analyses.

1. Measuring ambivalence

In VOX post-ballot data respondents are asked to position themselves on a series of arguments related to the project submitted to vote. Those arguments are either positive (i.e., they support the project) or negative (they oppose it or defend the status quo); usually, for each positive (pro) argument a similar negative (con) argument is proposed.

For a given argument, respondents have to declare if they: (−2) "totally disagree"; (−1) "disagree"; (0) "neither disagree nor agree"; (1) "agree"; (2) "totally agree".

An example of the argument variables in VOX data

On November 27, 2005 the popular initiative "for food without genetic engineering" was submitted to popular vote at the federal level. The initiative, launched by the Green party, asked to introduce in the Swiss Constitution an article that prohibited the Swiss agriculture to use any type of genetically engineered organisms for the next five years.

Respondents in the post-ballot VOX survey were asked to evaluate the following six arguments (in terms of a five-point scale from "totally disagree" to "totally agree", see above):

Arguments in favour of the initiative (PRO arguments, our translation):

1) Genetically manipulated food is a hazard to health

2) An agriculture free of genetically manipulated organisms preserves natural biodiversity

3) It is a good idea to take the time to reflect on those issues (i.e., thus accepting a 5 years ban)

Arguments against the initiative (CON arguments, our translation):

1) A new Law on the issue is not useful right now

2) The initiative is potentially harmful to the Swiss research

3) Consumers have to be free to choose between genetically manipulated products and those who are not

Measure(s) of ambivalence

The overall number of arguments varies accordingly to the importance of the issue (for highly important issues – such as, e.g., the Swiss adhesion to the EU – a larger number of arguments is used), but a minimum of six arguments (three pro and three con) is usually proposed in the VOX questionnaire.

Starting from those argument variables, several measures of ambivalence are possible. We discuss here three such variables: (A) a continuous one (used in our analyses), (B) a binary one and (C) a continuous one obtained inductively through a PCA factor analysis. All measures correlate strongly.

(A) Continuous variable. In order to get the **ambivalence variable used in our contribution** (**continuous variable**, in line with the literature) we proceeded in two steps:

(1) First, we combined the opinion on the (first) three PRO arguments in an additive scale that ranges from (−6) "disagree with all PRO arguments" to (6) "agree with all PRO arguments". We then did the same for the (first) three CON arguments and obtained an additive scale ranging from (−6) "disagree with all CON arguments" to (6) "agree with all CON arguments".

(2) Second, we added the values on those two scales and obtained a scale ranging from (−12) "disagree with all arguments" to (12) "agree with all arguments". Given that those two "extreme" positions (−12 and 12) might be considered as ambivalence at its maximum, we computed the absolute value on this variable and obtained a final variable ranging from (0) "lowest ambivalence" to (12) "maximal ambivalence". Empirical models in our contribution (except those in this Appendix) are based on this measure of ambivalence.

(B) Binary variable. Second, a more restrictive measure (yielding highly consistent results, see below) might be obtained by isolating those individuals that are ambivalent with respect to the others that are not (**binary variable**). Starting from the two additive scales computed in point (1) above, we get a binary variable by defining as "ambivalent" those individuals that have values ranging from (−6) to (−2) or from (6) to (2) on both variables.

This binary variable has the merit to directly combine into one simple measure both conditions described by Lavine (2001): first, the conflictual (positive and negative) reactions to the attitude object should be similar in magnitude. […] Second, ambivalence would seem to require that the positive and negative components be of at least moderate intensity. Thus, ambivalence should be

greater when voters have several positive and negative reactions […] than when they have only one positive and one negative reaction (Lavine, 2001: 918).

(C) Continuous variable from PCA factor analysis. Third, if ambivalence is such an important phenomena, then it should be possible to extract a measure of it inductively from the raw data. A **PCA factor analysis** (no rotation) shows indeed that two dimensions lay behind our raw data (the six argument variables, three PRO and three CON). The first underlying dimension (40.0% of explained variance) relates of course the opposition between those who support the project and those who oppose it; in such dimension, high positive values on the PRO arguments are associated with high negative values on the CON arguments.

The second underlying dimension (15.3% of explained variance) directly measures ambivalent positions (see Figure A1 below). On this second underlying dimension, high positive values are associated with strong support for all arguments (PRO and CON), whereas high negative scores are associated with strong opposition towards all arguments (PRO and CON).

Figure A1 below plots the contribution of each original argument variable on the two extracted dimensions. In the graph, the second dimension (vertical axe, "Component 2") measures ambivalence, i.e., to support/oppose both PRO and CON arguments.

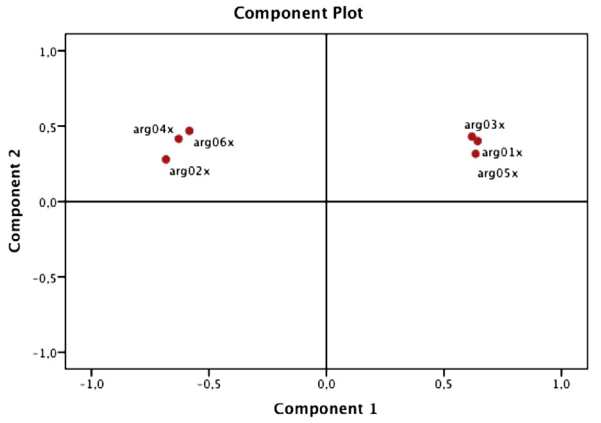

Figure A1. Component plot for PCA factor analysis on the six original argument variables

Note: variables arg01x, arg03x and arg05x measure positioning on the first three PRO arguments, whereas variables arg02x, arg04x and arg06x measure positioning on the first three CON arguments.

As for the first (continuous) variable, we simply computed the absolute value on this second underlying dimension; the obtained variable measures ambivalence and ranges from .0 (lowest ambivalence) to 3.4 (highest ambivalence).

Table A1 below presents the statistical scores for central tendency and dispersion for the three measures of ambivalence.

Table A1
Statistical résumés for the three measures of ambivalence.

Measure of ambivalence	Minimum (lowest ambivalence)	Maximum (highest ambivalence)	Std. dev.	Median	Mean
Continuous (A)	.0	12.0	2.83	3.0	3.15
Binary (B)	.0	1.0	.43	.0	.25
Continuous from PCA (C)	.0	3.4	.62	.59	.78

Table A2 below presents the Pearson's correlations between the three variables. The three measures strongly correlate, and especially the continuous measure of ambivalence (used in our analyses) and the measure extracted inductively through the PCA factor analysis. This shows high internal validity of our continuous measure of ambivalence.

Table A2
Binary correlations between the three measures of ambivalence.

Measure of ambivalence	Continuous (A)	Binary (B)	Continuous from PCA (C)
Continuous (A)	1.0	.68***	.82***
Binary (B)	.68***	1.0	.57***
Continuous from PCA (C)	.82***	.57***	1.0

Note: scores are Pearson's R; $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$.

In our data (Swiss federal ballots), the project submitted to vote with the highest share of ambivalent citizens (higher average on the continuous variable) is the popular initiative "against abuses in the immigration Law" voted on November 24, 2002 (average ambivalence of 4.76/12.00), whereas – ironically – the two projects on abortion voted on June 02, 2002 (a popular initiative and an optional referendum) have the lowest share of ambivalent voters (average ambivalence of 2.19/12.00) across the 75 projects voted during 1999 and 2005.

2. Additional empirical models

Table A3 below presents seven models that explain the presence of ambivalence, measures through our binary variable (see above). As discussed beforehand, all measures of ambivalence strongly correlate, and especially the continuous measure of ambivalence (used in our analyses) and the measure extracted inductively through the PCA factor analysis. The correlation between the continuous measure and the binary one presents a "lower" correlation (still at Pearson's $R = .68^{***}$);

Results in Table A3 are thus used as robustness check; results presented in Table A3 are highly consistent with those presented in Table 1 in our contribution (ambivalence as continuous variable). Results for the models explaining the PCA-extracted measure of ambivalence, available upon request, are not shown here. Such results are highly consistent with those presented in both Table 1 and Table A3.

Table A3
Multilevel determinants of ambivalence (binary variable).

Multilevel determinants	M1a	M1b	M2	M3a	M3b	M3c	M4
	Odds ratio (S_e)	Odds ratio (S_e)	Odds ratio (S_e)	Odds ratio (S_e)	Odds ratio (S_e)	Odds ratio (S_e)	Odds ratio (S_e)
Intercept	.29 (.10)***	.56 (.13)***	.23 (.11)***	.18 (.18)***	.16 (.22)***	.20 (.17)***	.18 (.19)***
Level-1 variables (individuals)							
Sophistication	.79 (.03)***	.	.76 (.03)***	.76 (.03)***	.76 (.03)***	.76 (.03)***	.76 (.02)***
Knowledge	.	.85 (.03)***	.	.	.	.	.
Interest in politics	.	.98 (.02)	.	.	.	.	.
Difficulties during opinion formation	.	1.22 (.05)***	.	.	.	.	.
Importance of the project (for country)	.	.96 (.01)***	.	.	.	.	.
Importance of the project (for myself)	.	.98 (.01)	.	.	.	.	.
Information use (ref: low use)	.	.	1.23 (.04)***	1.23 (.04)***	1.23 (.04)***	1.23 (.04)***	1.23 (.04)***
Moment of choice	.	.	1.05 (.01)***	1.05 (.01)***	1.05 (.01)***	1.05 (.01)***	1.05 (.01)***
Partisan heuristic	.	.	1.36 (.05)***	1.37 (.05)***	1.37 (.05)***	1.37 (.05)***	1.34 (.05)***
Trust heuristic	.	.	1.19 (.10)	1.19 (.10)	1.19 (.10)	1.19 (.10)	1.14 (.09)
Education	.93 (.02)**	.93 (.02)**	.92 (.03)***	.92 (.03)***	.92 (.03)***	.92 (.03)***	.91 (.03)***
Age	1.05 (.01)***	1.05 (.01)***	1.04 (.01)***	1.04 (.01)***	1.04 (.01)***	1.04 (.01)***	1.04 (.01)***
Sex (ref: female)	.99 (.04)	.99 (.04)	.99 (.04)	.99 (.04)	.99 (.04)	.99 (.04)	.98 (.04)
Level-2 variables (context)							
Intensity of political campaign	.	.	.	.74 (.32)	.82 (.29)	.	.76 (.29)
Intensity (no campaigns)	.	.	.	.	.	.84 (.43)	.
Intensity (yes campaigns)	.	.	.	.	.	.75 (.34)	.
Negativism in political campaign	.	.	.	1.70 (.30)†	1.22 (.38)	.	1.21 (.29)
Negativism (no campaigns)	.	.	.	.	.	1.81 (.34)†	.
Negativism (yes campaigns)	.	.	.	.	.	2.25 (.42)†	.
Instrument[a]: Popular initiative	.	.	.	1.28 (.19)	1.33 (.34)	1.17 (.20)	1.29 (.19)
Instrument: Optional referendum	.	.	.	1.23 (1.7)	1.33 (.18)	1.12 (.19)	1.24 (.17)
Issue[b]: Int'l and security policies	.	.	.	.88 (.21)	.89 (.22)	.74 (.19)	.87 (.20)
Issue: Energy, environment, land use	.	.	.	1.39 (.22)	1.42 (.23)	1.36 (.20)	1.38 (.22)
Party coalition (yes): left vs other	.	.	.	.	.96 (.39)	.	.
Party coalition (yes): conserv. right vs other	.	.	.	.	1.66 (.43)	.	.
Crosslevel interactions							
Sophistication*intensity	.	.	.	.	.	.	.82 (.13)
Sophistication*negativism	.	.	.	.	.	.	1.02 (.09)
Information use*intensity	.	.	.	.	.	.	1.06 (.13)
Information use*negativism	.	.	.	.	.	.	1.11 (.15)
Moment of choice*intensity	.	.	.	.	.	.	.87 (.04)***
Moment of choice*negativism	.	.	.	.	.	.	1.07 (.04)
Partisan heuristic*intensity	.	.	.	.	.	.	1.50 (.17)***
Partisan heuristic*negativism	.	.	.	.	.	.	1.13 (.12)
Trust heuristic*intensity	.	.	.	.	.	.	1.27 (.27)
Trust heuristic*negativism	.	.	.	.	.	.	1.72 (.31)
Interclass correlation[c]	$\rho = .07$	$\rho = .07$	$\rho = .07$	$\rho = .07$	$\rho = .07$	$\rho = .07$	$\rho = .07$
N (level-1)	58,576	58,576	58,576	58,576	58,576	58,576	58,576
N (level-2)	57	57	57	57	57	57	57

Note: Dependent variable is the presence of ambivalence (binary variable). Models with fixed effects (unit-specific models with robust standard errors), run with HLM 6.06 through Restricted PQL estimations. Intensity and negativism variables grand centred.
*$p < .05$, **$p < .01$, ***$p < .001$, †$p < .1$ (level-2 variables only).
[a] Reference category for juridical instrument: mandatory referendum (+counter projects).
[b] Reference category for issue: other issues.
[c] Interclass correlation for multilevel logistic models is calculated through the following approximation (intercept-only models): $\rho = (\sigma^2_{u0})/(\sigma^2_{u0} + \pi^2/3)$. The variance of level-2 residuals (σ^2_{u0}) is divided by the total variance (σ^2_{u0} plus the variance of the logistic distribution for level-1 residuals $\pi^2/3 = 3.29$). See Snijders and Bosker (1999: 224) for more details.

3. Survey questions

Table A4
Survey questions and coding

Variable	Question wording in survey	Coding
Position on argument	*Consider the following argument* [see Section 1 of the Appendix for an example]. *Could you please tell me whether you…*	(-2) Totally disagree (-1) Disagree (0) Neither disagree nor agree (1) Agree (2) Totally agree
Knowledge of the project title	*Last weekend, you were called to vote on a particular project. Could you please tell me what was the name of the project?*	[Open answer, recoded] (0) Wrong answer (1) Right answer

Table A4 (*continued*)

Variable	Question wording in survey	Coding
Knowledge of the project content	*And could you please tell me what was the content of the project?*	[Open answer, recoded] (0) Wrong answer (1) Right answer
Interest in politics	*Generally, how are you interested in politics?*	(0) Not at all interested (1) Not very interested (2) quite interested (3) Very interested
Difficulties during opinion formation	*For the project on which you voted last weekend, did you find it rather easy or difficult to form your opinion on the basis if the information that was provided to you?*	(0) Rather easy (1) Rather difficult
Importance of the project (for myself)	*Could you please tell me how important for you personally was the project you voted for last weekend? Please provide me a score from 0 to 10, where…*	(0) Not important at all (10) Highly important
Importance of the project (for the country)	*Could you please tell me how important for the country was the project you voted for last weekend? Please provide me a score from 0 to 10, where…*	(0) Not important at all (10) Highly important
Moment of choice	*Approximately, when did you take the final vote decision on about project?*	(0) Clear from the beginning (1) Some weeks before the ballot (2) 1–2 weeks before the ballot (3) A few days before the ballot (4) Less than a day before the ballot
Information source	*Which media sources did you consult during your opinion formation? Did you consult* [information source, e.g., journals]*?*	(0) No (1) Yes
Partisan affiliation	*Do you feel strongly affiliated with* [the preferred party]*, somehow affiliated or are you just sympathising?*	(1) Strongly affiliated (2) Somehow affiliated (3) Sympathising
Trust in government	*I'm going to read you two rather common propositions about the government. Which one do you feel the most appropriate?* *Proposition 1: I can generally trust the federal government; the government acts knowingly, for the better good.* *Proposition 2: More and more decisions are taken by the government against the people; the government does not know our concerns anymore.*	(1) Trust in government (2) No trust in government

Note: our translation from French/German. For readability reasons, only valid answers are presented in the table.

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