



# No, It Is Not All About Selective Exposure: Information Selection Strategies in Referendums

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## Abstract

This article presents an in-depth understanding of information selection strategies in referendums. It builds on the theories of motivated reasoning, cognitive dissonance, information utility, and social identity to examine selective exposure in the context of referendums, and highlights how individuals select information, opting for either congruent and partisan (selective choice) or balanced and discrepant (enlightened choice) sources of information. Empirically, our study relies on two cross-sectional online surveys ( $N=2,245$ ;  $N=735$ ) that took place in a real referendum campaign on an *Energy Act* in Switzerland. We exposed respondents to different information contexts and measured whether they chose selectively or in an enlightened way. We conclude that individuals choose balanced or discrepant sources of information more frequently than the literature on selective exposure suggests. Moreover, attitude strength plays a twofold role: In a pre-campaign context, attitude strength motivates individuals' enlightened choice; mid-campaign, however, it strengthens voters' selective choice.

**Keywords** Selective exposure · Information selection · Attitude strength · Referendums · Survey

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## Introduction

Scholars have often argued that democracy relies on the enlightened participation of its citizens. Dahl (1998) defines enlightened understanding as having effective opportunities to learn and weigh the consequences and alternatives of a proposal to form an opinion that ideally represents one's interests. In an ideal democratic process, citizens have then the competence to inform themselves about policy alternatives (Dahl, 1998: 37; Kaase, 1998: 27).<sup>1</sup> Nevertheless, cognitive constraints and related biases limit individuals' ability to choose an information selection strategy that would enable them to form enlightened opinions. Indeed, studies suggest that individuals become selective when they choose information sources (for a review see Smith et al., 2008; and Yeo et al., 2015). Most findings to this effect have been obtained in the context of elections.

The selective exposure hypothesis states that citizens are motivated to select information in line with their basic attitudinal commitments. This means that an attitude, or at least a prior stance, must exist to anchor the information selection strategy. Yet, scholars have argued that, in direct democratic votes, citizens cope with the highly demanding task of opinion formation in a state of relative ignorance (De Angelis et al., 2020; Magleby, 1989). Thus, it seems fair to postulate that citizens often lack clear prior stances when facing direct democratic votes. This is especially the case when the latter concern complex policies or policies with no direct link to citizens' daily lives. Thus, citizens tend to be uninformed and unsure about their voting intentions, which has raised the concern that they lack reliable political knowledge and may also lack the interest to make well-informed policy decisions (Achen & Bartels, 2016; Lupia & Matsusaka, 2004). At the end, citizens often lack a clear stance to anchor their information selection.

Citizens can overcome this opinion and information vacuum by consulting information sources conducive to nurturing their systematic reasoning – they can find policy arguments or use heuristic cues to reach a reasonable decision (Christin et al., 2002; Colombo, 2016; Colombo & Steenbergen, 2021; De Angelis et al., 2020). However, while Branton et al. (2019) suggest that partisan cues serve as determinants of voting in a referendum, such direct democratic votes often lack the explicit partisanship labels present in elections.

With that in mind, we expect that, compared to elections, direct democratic votes do not only induce a different opinion formation process but also trigger divergent motivated information selection strategies. Nevertheless, very few studies have so far examined information selection strategies in the context of a referendum (Primo, 2013), where knowing and weighing different arguments (i.e., using an enlightened information strategy) seems particularly important (Dermont & Stadelmann-Steffen, 2019). Moreover, we argue that the fact that previous research has largely concentrated on electoral campaigns has also led to an overly strong focus on selective information processes, neglecting the role of the selection of more balanced information that enables citizens to weigh the pros and cons of an issue or a candidate.

<sup>1</sup> To be precise, Dahl (1998) has defined five criteria for an ideal democratic process: enlightened understanding, effective participation, voting equality, control of the agenda and inclusion of adults.

This is the starting point of our study: we investigate *the relative importance of selective and enlightened information selection strategies in the context of a referendum* and explore *how these strategies are related to attitude strength*. We use a minimal definition of an enlightened selection strategy – unlike a selective selection, a selection of information is ‘enlightened’ when it includes at least some discrepant information or even a balanced set of pro and con arguments. We would like to point out that we only consider the information selection behavior, calling it enlightened or selective, and not the complex information processing and opinion formation that follow information selection.

To disentangle the complex environment underlying selective exposure in referendums, we rely on two cross-sectional online surveys conducted at two different points of a real referendum campaign on a new *Energy Act* in Switzerland in May 2017 ( $N=2,245$  in the pre-campaign survey, and  $N=735$  in the mid-campaign survey). These two surveys presented different information contexts and different measurement methods, asking respondents to choose between different bundles of information, which were either balanced (including arguments in favor of and against the Energy Act) or unbalanced (including only arguments in favor of or against the act, or only arguments put forth by the respondent’s preferred party).<sup>2</sup> We are interested in determining whether respondents’ information selection strategies were enlightened (i.e., they chose balanced information) or selective (i.e., they chose imbalanced or one-sided information).<sup>3</sup> Furthermore, we measure whether their choices were influenced by their attitude strength -- namely, whether and how the information strategy of voters differed between those who had a more or less strong opinion on the topic.

In so doing, our article goes beyond previous studies on information behavior. First, we reinforce the realism of the information environment by also providing respondents with the opportunity to choose balanced content (Peralta et al., 2017), i.e., sources of information that present arguments both in favor of and against the issue at stake. To reflect the information context as realistically as possible, we expanded the range of available information in the second campaign phase. Second, not only do we relate information selection strategies to individuals with prior attitudinal commitments, but we also incorporate undecided voters who frequently make up an important group in referendums, especially at the beginning of the campaign. Third, the design simultaneously assesses multiple individual predictors of information selection strategies. Finally, our study is a first attempt at examining selective exposure in the context of a referendum campaign. Despite referendums’ increasing popularity as instruments of decision-making (Qvortrup, 2014), scholars have overlooked selective exposure in such contexts. We thus contribute to the discussion on the expansion of participation opportunities (Bowler et al., 2007): Is direct democracy really “dangerous,” as the Washington Post claimed in the aftermath of

<sup>2</sup> In this paper, we consider the direction of respondents’/the information’s positions as ‘No’/‘against’/‘contra’ if the position is against the Energy Act, and as ‘Yes’/‘in favor’/‘pro’ if the position is in favor of the Energy Act (and not the referendum itself).

<sup>3</sup> It is worth noting that the main goal of this study is to compare the relative importance of enlightened and selective information gathering strategies at two different points in the campaign. Conversely, we refrain from a systematic temporal comparison as the survey design differed between the two cross-sectional surveys.

the Brexit vote, or does the opportunity to have a say trigger a more enlightened information selection?

## Theory

### Enlightened and Selective Information Strategies

We define the political information environment as the quantitative supply of political content that a citizen can find ‘out there’ (Van Aelst et al., 2017). However, the sheer quantity of available information raises the question of how individuals process this supply of political information given their cognitive and time constraints. While it is widely acknowledged that citizens expose themselves to some content while ignoring others (Zaller, 1992), the literature offers two contrasting views on how individuals select information.

On the one hand, individuals choose information with the aim of reaching an enlightened decision (this is Dahl’s (1998) idea of an ideal democratic process). Lupia (2016) has argued, citizens might reach a reasonably enlightened decision without full information. In a direct democratic vote, such a reasonable decision can also be achieved using heuristic shortcuts, which can substitute for thorough political information and systematic reasoning (Christin et al., 2002; Colombo, 2016; Colombo & Steenbergen, 2021; De Angelis et al., 2020). Importantly, however, according to this ideal, individuals choose information as diverse as possible, which provides them with plenty of varying arguments. Ideally, the source of this information is objective and impartial<sup>4</sup> or the different arguments come from sources from different political camps – in the case of a referendum, this would mean from both the pro and the contra sides. This kind of information enables citizens to consider different arguments about an issue. We define this information selection strategy as *enlightened information strategy*.

On the other hand, however, research has repeatedly shown that cognitive constraints and related biases limit an individual’s ability to select information in an enlightened way (Stroud, 2008). First, citizens are goal-oriented information processors and tend to choose (and rely on) information that comes from their narrow echo chambers. This means that they look out for congruent information, i.e., information in line with their basic attitudinal commitments (Sunstein, 2001). Thus, citizens select political information with a confirmation bias (see for a review Knobloch-Westerwick et al., 2020). This conclusion draws on both cognitive dissonance theory and information utility. According to the former, citizens holding two inconsistent elements face a state of discomfort (Festinger, 1957). They engage in psychological work to reach a cognitive equilibrium (Harmon-Jones & Harmon-Jones, 2007). The

<sup>4</sup> In Switzerland, this is normally the case with government information. Although the government takes a stance in favor of or against the issue at stake, any information the government provides is under scrutiny by all political actors (Hessami, 2016). Article 10a of the Federal Act on Political Rights states that “The Federal Council shall continually inform persons eligible to vote about federal proposals to be submitted to the vote of the People. In doing so, it shall comply with the principles of completeness, objectivity, transparency, and proportionality”.

latter is the degree to which a piece of information supports citizens' opinion formation (Knobloch-Westerwick & Kleinmann, 2012). Citizens eventually weigh utility against cognitive discomfort. If utility outweighs discomfort, it overrides selective bias. Second, social identity theory postulates that individuals place themselves into groups (Tajfel & Turner, 1979). Applying this to information selection, scholars have demonstrated that individuals favor pieces of information produced by their ingroup or which present their ingroup in a positive light, i.e., there is an ingroup bias (see for example Appiah et al., 2013). In a referendum context, Kriesi (2005) has shown that many citizens follow heuristic cues from trustworthy political actors, such as their preferred political party. That is, a preferred political party can be viewed as a social ingroup. We call these behaviors *selective information strategies*:<sup>5</sup> Individuals chose unbalanced sources of information that contain only arguments in favor or against the referendum's issue or only information from the respondent's preferred party.

### The Role of Prior Attitudes

Most previous research suggests that prior attitudes on an issue or to a person influence the type of information processing people engage in (e.g., Brannon et al., 2007; Taber and Lodge, 2006). Fazio (1995) defines an attitude as a stored association between an object and an evaluation of the object. Most prominently, selective information strategies are expected to be more likely if a person holds prior positions and attitudes (Garrett, 2009; Valentino et al., 2009). According to the cognitive dissonance theory (Festinger, 1957), individuals are motivated to look for information in line with their prior opinions and to avoid dissonant information. Relatedly, social identity theory indicates that individuals favor pieces of information from their ingroup, e.g., their preferred political party. Hence, a confirmation and an ingroup bias dominate the *selective information strategy* (Knobloch-Westerwick et al., 2020).

Conversely, if individuals have already formed an opinion about an issue, they can arguably use this prior attitudinal commitment to anchor the evaluation process of new and contrary information, which is then used to update the prior attitude (Taber & Lodge, 2006, p.755). This fits our conceptualization of an *enlightened information strategy* in the sense that, depending on their prior opinions, individuals *intentionally* choose discrepant information.

### Information Selection Strategies in Referendums

While most previous research has investigated information selection strategies in an electoral context, here we concentrate on the referendum context. We argue that two important, but so far neglected aspects of individual information selection deserve particular attention.

First, most of the previous literature on selective exposure did not consider balanced sources of information as a choice for respondents to make (Peralta et al.,

<sup>5</sup> Note that an enlightened information selection strategy is also selective in the sense that in a context of unlimited information, individuals need to choose some information while ignoring other. However, in this study, we apply the notion of selectivity to the *information's content*.

2017). The main reason for this omission has to do with previous studies that focus on the electoral context – mainly U.S. races – where information is related to a candidate or a party rather than to an issue. Moreover, selective information strategies have received more attention due to the potential risk they pose to the workings of democracy. The rare existing evidence, however, suggests that if available, the choice of balanced information is more frequent than one might theoretically expect (Feldman et al., 2013; Garrett & Stroud, 2014). What is more, Marquis et al. (2011) and Tresch (2012) have demonstrated that the Swiss media provide mostly balanced information during referendum campaigns. This is in contrast with most existing studies that examine a partisan media environment (see for example Arceneaux and Johnson, 2013).

Second, given the diversity and complexity of the policies at stake in referendums, most citizens lack knowledge reliable enough to let them form an attitudinal commitment before a referendum comes around (De Angelis et al., 2020; Magleby, 1989). Naturally, some individuals do have prior attitudes or even opinions about the issue in question even before the campaign starts. Be it because they are politically interested and have already followed the debate in Parliament or because they are strongly affected by a topic, individuals with prior attitudes may choose an information strategy different from that of individuals without any knowledge of the topic. However, a considerable proportion of the electorate, possibly even a majority, will have an empty or almost negligible store of personal information at the beginning of the campaign. In the case of the referendum under investigation in this contribution, this share of undecided voters amounted to roughly two-thirds of the electorate (Dermont & Stadelmann-Steffen, 2019). This scarcity is in sharp contrast with electoral contexts where citizens form their opinions by accumulating information gleaned from the media and/or by updating their already existing information stock through a learning process (Graber, 2004). Some studies suggest that mechanisms similar to those affecting “decided” voters could also be at play in undecided individuals. While the latter do not exhibit explicit prior attitudes or positions on the issue at stake, their information selection may be triggered by automatically activated associations (Galdi et al., 2012) or implicit attitudes (e.g., Arendt et al., 2019). Nevertheless, when investigating information selection strategies in a referendum context, it is important to consider that the information selection strategies of decided and undecided voters may be different.

Table 1 displays two different information selection strategies in referendum campaigns. Depending on the type of information an individual chooses and on whether she has prior attitudinal commitments, she either opts for an enlightened information strategy or a selective information strategy. On the one hand, citizens may seek an enlightened understanding of the proposals on the ballot. For this reason, they may pursue diverse information -- namely, information that provides arguments both in favor of and against the proposal, ideally in a balanced, impartial, or objective way, or discrepant information if they already hold an opinion on the proposal at stake. On the other hand, according to the second perspective, citizens rely on one-sided information that confirms their ideological positions or their initial hunches about the proposal. Therefore, citizens are likely to choose one-sided information, i.e., data

**Table 1** Information selection strategies in referendums

| Attitude                                   | No attitudinal commitment              |  | Prior attitudinal commitment                                 |  |
|--|--|--|--|--|
|  | Enlightened information strategy       | Selective information strategy         | Enlightened information strategy                             | Selective information strategy         |
| Balanced, impartial, objective information | Preferred party information            | Preferred party information            | Balanced, impartial, objective information                   | Preferred party information            |
| Government information                     | Either pro or against information only | Either pro or against information only | Government information                                       | Congruent information (pro or against) |
|  |  |  | Discrepant / counterattitudinal information (pro or against) |  |

that support either a pro or an against position, and/or information coming from their preferred political party.

While the two strategies of information selection proposed here are mutually exclusive at the individual level, they can coexist at the level of the electorate. Some individuals may follow the ideal of an enlightened understanding, while others pursue a selective information strategy. Are there individuals seeking an enlightened understanding or is the referendum context identical to an electoral context where voters choose information quite selectively? Do decided and undecided voters differ systematically in their information selection strategies? In short, this paper aims to shed light on *how widespread the enlightened and selective information strategies are among the electorate and the relative importance of each of them.*

**The Influence of Attitude Strength**

In this study, we build upon Krosnick and Petty (1995) to differentiate between a prior attitudinal commitment and attitude strength. Indeed, having a prior attitude does not imply that this attitude is *persistent* or *resistant*. Krosnick and Petty (1995, p.3) consider that an attitude is strong if it “remains unchanged over an extended time period” and if this attitude can “withstand an attack”. In the case of a referendum, we can assume that not only many citizens lack a prior attitudinal commitment, but also that those who hold a prior attitude might have either an attitude that persists over time and resists counterattitudinal arguments, i.e., a strong attitude, or not. Thus, we expect attitude strength plays an important role in the choice of an information strategy in a referendum. Hence, we assume that attitudinal strength also fosters a selective information strategy during a referendum campaign. Considering that a strong attitude is persistent and resistant, we assume that individuals with strong attitudes face a greater state of discomfort when they deal with discrepant information. A selective information strategy will reinforce their attitude strength and significantly improve the chances of them reaching a cognitive equilibrium. Furthermore, one might assume that individuals with strong attitudes are likely to sort themselves into an ingroup, e.g., a preferred political party. In line with Kriesi (2005), individuals favor heuristic shortcuts from their preferred political party, i.e., they succumb to an ingroup bias.

In contrast, we expect individuals with lower attitudinal commitments to be prone to select sources of information in an enlightened way. The expected utility of balanced and/or discrepant information outweighs their cognitive discomfort (Garrett et al., 2013) or ingroup attachment (Knobloch-Westerwick et al., 2020). Therefore, citizens balance different arguments to reach a decision based on facts and logic because they are driven by an accuracy goal, i.e., forming an opinion that ideally represents one's interests.

**Hypothesis 1 (H1)** In a referendum, a stronger attitude increases the probability that an individual will choose a selective information strategy and, inversely, reduces the probability that they will choose an enlightened information strategy.

## Data and Methods

### Context

To answer our research question, we analyze a referendum campaign on a new energy act in Switzerland. Switzerland hosts most direct democratic decisions in the world (Altman, 2010). What this strong participatory context means for citizens' political knowledge and motivation is an ongoing debate that links to our contrasting theoretical expectations about information selection. On the one hand, these regular direct democratic decisions are considered conducive to citizens' political knowledge and ability to cope with the complexity of politics, i.e., their cognitive mobilization. For example, Linder & Müller (2017) stress that Swiss citizens are used to seeking political information to cast a direct democratic vote. On the other hand, the high number of votes places high demands on citizens, who must form opinions on many different issues each year - often even on several issues on the same voting day (Hessami, 2016). This high demand might lead to certain voter fatigue (Freitag & Stadelmann-Steffen, 2010) and increase the likelihood of selective information seeking.

The May 2017 referendum vote on a new energy act is an ideal case for the study of information selection strategies for several reasons. First, while crowded ballots are frequent in Switzerland (Hessami, 2016), the May 2017 new energy act was the only proposal on the ballot. Thus, the vote took place with no campaign interference from other proposals and campaigns.<sup>6</sup> Second, the energy issue had been subject to an ongoing debate since the 2011 Fukushima incident, which implies that voters were at least superficially informed about it. This should not only reinforce the probability that respondents held a prior attitudinal commitment, but also trigger automatically activated associations (Galdi et al., 2012) and implicit attitudes (e.g., Arendt et al., 2019). Third, 'hot' cognition issues like climate change posit affect-laden political perceptions - a situation that fosters goal-oriented information processing (Yeo et al., 2015). In light of the second and the third points, the case under investigation should

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<sup>6</sup> However, Milic (2022) demonstrates that the quality of the vote is similar in crowded and single ballots.



be considered a conservative test for the choice of an enlightened information selection strategy.

## Data

We use data from two cross-sectional online surveys conducted between the 13th and the 20th of March 2017, and the 19th and the 26th of April 2017, respectively.<sup>7</sup> The two surveys cover different campaign contexts: a pre-campaign context ( $N=2,245$ ) and a mid-campaign context ( $N=735$ ). Using two different contexts gives us the opportunity to more realistically test the impact of attitude strength that differs before the beginning and in the middle of a campaign. Furthermore, we simulate the differing supply of information in the two phases of a campaign: little information at its beginning and much more information opportunities in its midst.

We used the polling agency Qualtrics (Qualtrics, 2017) to collect all samples from an opt-in online panel, using a quota sampling method. We targeted the population over the age of 18 living in Switzerland and established language, age, gender, and canton (i.e., the Swiss subnational units) quotas to obtain a representative sample (see Online Appendix Table A1). Participants received a link to the online survey and were invited to fill in the survey on either a smartphone or a computer. None of the respondents participated in the two online surveys.

## Operationalization

Following Jang (2014) and Winter and Krämer (2012), we chose a selection rate task to measure respondents' information selection strategy. In the pre-campaign survey, respondents were exposed to an information board with four randomly ordered sources of information: a summary of pro arguments, a summary of against arguments, a comparison between pro and against arguments, and a summary of the respondent's preferred party arguments.<sup>8</sup> The respondents were instructed to select a single source to obtain information on the issue at stake.<sup>9</sup> To mimic a pre-campaign context, only four sources were presented, as information remained scarce before the campaign and the government had not yet launched its campaign.<sup>10</sup>

In the mid-campaign survey, respondents were instructed to choose four sources of information out of twelve randomly ordered possibilities. We provided participants with a broader choice as the campaign had already reached the public agenda. Hence, this design reflects a real decision context, in which more and more diverse information becomes available as the campaign progresses. The twelve sources were

<sup>7</sup> The authors confirm that the data supporting this study's findings (<https://doi.org/10.23662/FORS-DS-952-2>) and the replication file ([https://github.com/ZumofenG/P1\\_SelectiveExposureReferendums/blob/main/stats/dofile\\_SWReferendums\\_2021.do](https://github.com/ZumofenG/P1_SelectiveExposureReferendums/blob/main/stats/dofile_SWReferendums_2021.do)) are available online.

<sup>8</sup> At the beginning of the survey, respondents were asked which party they usually voted for. This partisanship label was then specifically adjusted for each respondent in the information board to fit their preferred political party. The same procedure was used in the mid-campaign survey.

<sup>9</sup> The exact wording was: "Given the pre-campaign context, you have the opportunity to better understand the issue by choosing one source of information."

<sup>10</sup> The government officially launched the campaign on the 21st of March 2017.

extracted from printed real-world publications: Three sources adopted a “pro” position on the new energy act; three sources stated a position against it; four sources embraced a balanced position; one source proposed the arguments of the respondent’s preferred political party; and one source laid out the government’s arguments (see Figures A1 and A2 in the Online Appendix). We then asked respondents to pick pieces of information that they would use to advise a friend.<sup>11</sup>

It is worth noting that not only the varying layout of the information boards, but also the different framing of the questions in the two surveys could affect an individual’s information selection strategy. First, the cognitive load reduction is supposed to raise the probability of making an enlightened choice (Fischer et al., 2005) and the limited choice is expected to reinforce selective choice (Fischer et al., 2005; Jonas & Frey, 2003). Second, the framing of the questions might elicit different information selection strategies. Though citizens are motivated to consider all relevant information to reach an accurate conclusion, they are also constrained by directional goals (Kunda, 1990; Taber and Lodge, 2006). On one hand, we can expect that the objective of informing themselves strengthens directional goals, i.e., selective choice. On the other hand, literature demonstrated that the advisor role bolsters enlightened choice (Jonas & Frey, 2003). That is, citizens are willing to understand arguments from both sides. However, the rationale behind the advisor role framing in the mid-campaign survey was to do justice to the fact that most respondents have already informed themselves well in a mid-campaign context. Hence, when designing the surveys, our priority was not to exactly compare the results from the two surveys, but rather to have optimal, i.e., realistic, snapshots of how widespread the two information selection strategies are among the electorate at different stages in a real-world referendum campaign context.

## Dependent Variable

We operationalize an individual’s information selection strategy based on their choice of a behavior model in a referendum context. We use both the selection rate of one information source over another and respondents’ attitudinal commitments (see Table 1 above). Both are either binary (pre-campaign) or ordinal variables (mid-campaign).

We mainly make a distinction between an *enlightened* and a *selective choice*. As previously discussed, ‘enlightened choice’ refers to the selection of information including both arguments in favor and against the proposal, i.e., balanced information, information coming from the government, or, in the case of voters with prior attitudes, the selection of discrepant information. Conversely, ‘selective choice’ entails the selection of congruent information (for voters with prior attitudes), exclusively pro or against arguments (for voters without prior attitudes), or information from one’s preferred political party (i.e., partisan choice).

<sup>11</sup> The exact wording was: “Imagine you have to explain the vote on Energy Strategy 2050 to one of your friends. To help you, we provide a selection of 12 newspaper articles discussing this vote. Please select four articles from this selection”.

We measure the percentage of selected sources based on the probability of choosing them. In the pre-campaign survey, categories were mutually exclusive. This means that the dependent variable is a binary variable that obtains the value 0 if the respondent opted for an *enlightened choice*, and 1 if the respondent opted for a *selective choice*. In the mid-campaign survey, respondents were instructed to pick four sources of information. To measure the information selection strategy, we construct an ordinal dependent variable ranging from 0, i.e., the respondent picked no *enlightened choices* out of their four information choices, to 4, i.e., the respondent picked four *enlightened choices* out of their four information choices.

## Independent Variables

Respondents stated their *attitudinal commitments* before being exposed to the information selection task. In the pre-campaign survey, we defined a binary variable that takes the value of 0 if the respondent was undecided on the proposal's issue, i.e., they did not have an attitudinal commitment, and a value of 1 if the respondent indicated that they already had a more or less clear opinion on the energy act, i.e., they had a prior attitudinal commitment. Accordingly, in the mid-campaign survey, we used a scale ranging from 0 "Will absolutely certainly reject" to 100 "Will absolutely certainly accept." We rescaled the variable to create a dummy for undecided voters, i.e., indicating the value of 50. In other words, we consider that the respondents who indicated 50 were truly *undecided*, and the rest of them who indicated numbers between [0;49) and (51;100] had a prior attitude, or at least a hunch about their voting decisions.<sup>12</sup>

To measure the strength of respondents' attitudes, we took advantage of the referendum issue's multidimensional character; a citizen may have supported some of the dimensions while rejecting others (Stadelmann-Steffen & Dermont, 2018). In the survey, respondents answered specific questions that captured their positions on four dimensions of the issue at stake -- namely, concern about higher energy prices, concern about the need for energy imports, the economic potential of renewable energy, and renewables' potential to replace nuclear energy. They ranked their agreement with these sub-dimensions on a 1-to-4 scale. We operationalized the four dimensions into one additive index ranging from 4 to 16, where 4 stands for attitudes in accordance with a rejection of the proposal whereas 16 reflects a position strongly in favor of the new energy act. To account for the fact that attitude strength and position are two independent attitudinal dimensions, we used this index to create a measure of attitude strength. For example, respondents with an index of 4 (the minimal index value) are as strongly against the proposal as respondents with an index of 16 (the maximum index value) are in favor of it. They both obtain the value 6, i.e., a very strong attitude. On the opposite end, respondents with an index of 10 (the middle index value) have the weakest attitudes. They obtain a value of 0, i.e., an extremely weak attitude. *Attitude strength* thus is an ordinal variable ranging from 0 (not strong at all) to 6 (very strong).

<sup>12</sup> For further details please refer to Figures A3 in Online appendix.

## Control Variables

The surveys included questions about sociodemographic and political attributes, which we used as controls. Based on previous findings in the literature, we expect that education, an interest in politics, and political knowledge influence individuals' choice of information. Those who have these resources are more likely to choose information in an enlightened way. Trust in the government and attachment to a political party may influence the choice of government information (enlightened) or party information (selective), respectively (see Garrett, 2009; Taber & Lodge, 2006).<sup>13</sup> We further control for gender, age, and respondents' willingness to participate in the vote (see Table A1 in the Online Appendix for further details).

## Empirical Results

Our analysis relies on selection rates to analyze information selection strategies in a referendum context. Prior to the campaign, roughly two out of three respondents (65.1%) chose a balanced or, in cases of existing prior attitudes, a discrepant source of information. While this strategy was still popular in the middle of the campaign (in the second survey), its selection rate dropped to 54.9%. Conversely, approximately one-third (pre-campaign) and close to half (mid-campaign) of all respondents opted for congruent or partisan sources of information, i.e., chose to remain in their echo chambers (Sunstein, 2001).

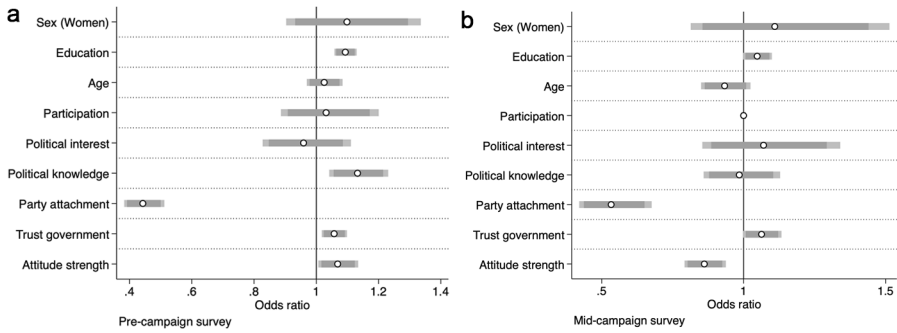
Hence, to a certain extent, the results support the idea that neither information selection strategy eliminates the other at the level of the electorate. More important, however, there is strong evidence for the prevalence of an enlightened information selection strategy before the beginning of the campaign, with two-thirds of all respondents selecting balanced or discrepant information. Nevertheless, the selective information strategy remains relevant, especially in the middle of the referendum campaign, with close to half of all respondents opting for a congruent or a partisan source of information. A majority of individuals chose an enlightened rather than a selective information strategy, seeking to form their opinions based on diverse/balanced and/or discrepant sources of information.

We ran binary<sup>14</sup> (for the pre-campaign survey) and ordinal<sup>15</sup> (for the mid-campaign survey) logistic regressions to test our main hypothesis (see Fig. 1) (See Table

<sup>13</sup> We refrained from including affiliation to a particular party as a control variable. We postulated that it is the strength of the affiliation to a party rather than the affiliation to a party itself that motivates an *enlightened* or *selective choice*. Furthermore, not all political parties positioned themselves clearly in favor of or against the *Energy Act*. For example, although the FDP (national section) was in favor of the energy act, 12 of its subnational sections recommended a vote against it.

<sup>14</sup> We cannot reject the hypothesis that the model is well calibrated  $\chi^2(2, 197) = 2,211.69, p = .35$  (Hosmer-Lemeshow goodness-of-fit test).

<sup>15</sup> We reject the hypothesis that the proportional odds assumption is valid ( $p < .001$ ). It is the variable of interest—*Attitude strength*—which violates it. It is then necessary to consider *attitude strength* as a discrete variable and to measure its predictive marginal effects (see Fig. 2). We also ran an ordinal logistic model without attitude strength (3), a generalized (4) and a multinomial (5) logistic regression and found similar results (see Table A3 in the Online Appendix).



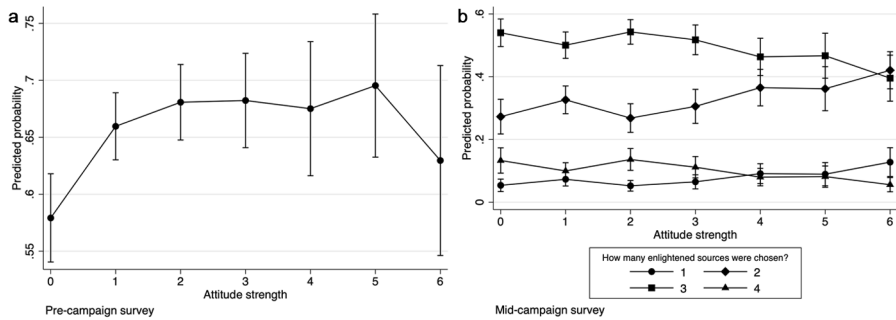
**Fig. 1** Logistic Regression – The Predictors of an Enlightened Information Selection Strategy  
*Note:* Error bars are 90% (dark grey) and 95% (+ lighter grey) confidence intervals.

A3 in the Online Appendix for further details). Figure 1 highlights the predictors of an enlightened information selection strategy. It displays the odds ratio of the independent variables and the control variables. An odds ratio above 1 indicates a positive relationship between the respective variable and the likelihood of an enlightened choice. Inversely, an odds ratio below 1 pinpoints a negative association between the two, i.e., a higher likelihood of a selective choice.

Most important for our purposes and in line with existing research on selective exposure (see Smith et al., 2008; and Yeo et al., 2015), the results document that attitude strength is significantly related to information selection strategies in a referendum context. However, we can only partly accept H1 because the influence of attitude strength is twofold. On the one hand, we reject hypothesis 1 in the pre-campaign context because, at that time, attitude strength reinforces (rather than lowers) the likelihood of an enlightened choice (see the left panel of Fig. 1). Individuals with stronger attitudes are more likely to opt for an enlightened information strategy, i.e., to choose balanced, discrepant, and/or institutional information sources. *Ceteris paribus*, the odds of choosing an enlightened source of information are 1.07 ( $SD=0.03$ ) higher for each one-unit increase in attitude strength.

On the other hand, we accept hypothesis 1 in the mid-campaign context (right panel in Fig. 1). As the campaign evolves, individuals with stronger attitudes are more likely to choose a selective information strategy, i.e., a congruent and/or partisan source of information. The odds of choosing an enlightened source of information decrease by 0.86 ( $SD=0.04$ ) with each one-unit increase in attitude strength, keeping everything else constant. This seemingly contradictory result emphasizes the informational role referendum campaigns play.

To obtain finer-grained results, we measure attitude strength’s predictive marginal effect on enlightened choice (see Fig. 2). The predictive marginal effect calculates the relationship between a discrete change in the independent variable (attitude strength) and the corresponding change in the outcome of the dependent variable (enlightened choice). In other words, it measures the influence on the information selection strategy if the ordinal variable attitude strengths changes from one category to the other. In the pre-campaign context, respondents with moderate attitudes [1, 5] make an enlightened choice close to 67% of the time. In contrast, the mean enlightened choice



**Fig. 2** Attitude Strength's Predictive Marginal Effect on Enlightened Information Selection Strategy  
*Note:* Error bars are 90% confidence intervals.

of those with “not strong at all” (0) or “very strong” (6) attitudes is below 60%. In addition, the lowest predictive probability of picking an enlightened source of information exists when attitude strength equals 0 (no strong at all) or 6 (very strong). The correlation matrix (see Online Appendix Table A2) indicates that attitude strength is correlated with education, political knowledge, and political interest.

In the mid-campaign context, the predictive probability of picking 3 or 4 balanced or discrepant sources of information decreases progressively as attitude strength increases. The cut-off point appears when attitude strength is between 3 and 4. In the same way, the predictive probability of picking 1 or 2 congruent or partisan sources of information increases progressively as attitudes become stronger.

Finally, it is worth noting that an enlightened choice is selected more than 50% of the time, regardless of attitude strength. Thus, the majority of respondents tend to choose enlightened sources of information. This confirms our descriptive results that when given the opportunity, individuals are prone to choose neutral and/or discrepant sources of information.

All the findings we report are robust against the inclusion of our control variables. Sociodemographic and political attributes also affect the choice of an information selection strategy. In the pre-campaign context, higher education and higher political knowledge motivate the selection of balanced information at the expense of selective choice. This effect vanishes once the campaign is in full swing. Furthermore, a stronger party attachment increases the odds of selecting a congruent or partisan source of information by 2.25 ( $SD=0.17$ ) (at the beginning of the campaign) and 1.87 ( $SD=0.23$ ) (in the middle of the campaign). The relevance of party attachment diminishes somewhat during the campaign but remains highly significant. This is in accordance with Branton et al.'s (2019) and Kriesi's (2005) expectations that party affiliation remains a determinant of voting behavior in the context of referendums.

## Discussion and Conclusion

The current study builds on the theory of selective exposure and extends it to a direct democratic information environment. Based on the existing literature, we assume that the lack of a clear prior stance on the policy at stake triggers an information

selection strategy that is different from that of an electoral context. Thus, we make a conceptual distinction between an enlightened information selection strategy and a selective information selection strategy and empirically investigate the role attitude strength plays in the choice between these information selection strategies. To do so, we use two cross-sectional online surveys carried out at two different points in time during a real referendum campaign in Switzerland.

Our findings illustrate the relative importance of an enlightened information strategy in a referendum context. That is, the choice of an enlightened information strategy is more frequent than the literature might lead us to believe. This is particularly so before the campaign's onset, when individuals opt for a balanced or a discrepant source of information two-thirds of the time. While the selective information selection strategy gains some importance during the campaign, just about half of all respondents continue to opt for enlightened information in the middle of the campaign. Thus, many individuals are motivated by accuracy goals and aim for enlightened participation (Dahl, 1998) to reach a decision based on facts and logic. Conversely, only a third (pre-campaign) and one-half (mid-campaign) of participants opt for a selective information selection strategy and stay in their echo chambers. Our results are similar to Feldman et al.'s (2013), Garrett and Stroud's (2014), and Peralta et al.'s (2017) findings on the selection of neutral sources of information.

As previously mentioned, our findings support the notion that a selective information strategy is increasingly likely once a campaign has started. Even though automatic associations (Galdi et al., 2012) and implicit attitudes (Arendt et al., 2019) might be at play, most citizens face referendums in a state of relative ignorance (de Vreese, 2007). In the case of the new energy act, two-thirds of all citizens were undecided before the beginning of the campaign (Dermont & Stadelmann-Steffen, 2019). This is in stark contrast with the situation at the beginning of electoral campaigns. One might assume that utility outweighs dissonance at the beginning of a campaign because attitudes are not yet crystallized, and because citizens need to be aware of congruent and discrepant information to form their attitudes and defend their opinions (Knobloch-Westerwick, 2008; Valentino et al., 2009). Indeed, as undecided individuals do not face any cognitive discomfort, their behavior is most strongly driven by informational utility. Accordingly, in most cases, they opt for an enlightened source of information. These findings contradict Clark et al. (2008) and Nordgren et al. (2006) who claimed that individuals with weaker attitudes, i.e., ambivalent, are more prone to selective exposure.

Our study also confirms the role of attitude strength in the choice of an information selection strategy. This role is twofold. First, in the pre-campaign context, attitude strength fosters the choice of an enlightened information strategy, rather than a selective information strategy. One possible explanation for this is the correlation between attitude strength and education, political knowledge, and interest in politics. Individuals with higher education, higher political knowledge, and higher political interest will acquire a higher utility by selecting balanced and discrepant information. Thus, they make use of balanced and discrepant information to develop and strengthen an attitude, and to feel more confident to argue (Stroud, 2010). This utility outweighs their potential cognitive discomfort which is rather low at the beginning of the campaign. Second, in the middle of a campaign, attitude strength reinforces the



selective information strategy. That is, individuals with strong attitudes face a greater state of cognitive discomfort when they encounter discrepant information and favor ingroup pieces of information, e.g., the preferred political party heuristic shortcut. They opt for congruent or partisan information to reach cognitive equilibrium. From a democratic theoretical perspective, these individuals stay in their echo chambers once their attitudinal commitment has been established. However, according to our results, echo chambers are not as dominant as one would assume, as individuals still opt for an enlightened source of information more than half of the time, regardless of the strength of their attitudes.

In analyzing the role of attitude strength, we have simultaneously considered political and sociodemographic attributes. First, individuals rely on their education, political knowledge, and party attachments to guide their information selection. Indeed, highly educated and politically knowledgeable individuals follow the ideal of an enlightened information selection in a pre-campaign context. This finding partly challenges previous findings by Garrett (2009) and Taber and Lodge (2006). However, in the mid-campaign context, the role of education and political knowledge vanishes. Unsurprisingly, our findings indicate that party attachments' influence on the choice of information selection is non-negligible. This is in line with Kriesi's (2005) and Dermont & Stadelmann-Steffen's (2019) findings.

Overall, our findings are good news for democracy. Individuals do not necessarily remain in their echo chambers when they face a referendum. Indeed, when given the opportunity to choose, a majority opt for an enlightened information strategy, instead of a selective exposure strategy. We lean towards the conclusion that direct democracy is not necessarily "dangerous," as the Washington Post claimed in the aftermath of the Brexit vote. At least in the Swiss context, where direct democratic decisions are frequent and form an integral element of the decision-making process (Heidbreder et al., 2019; Zumofen, 2023a, b) individuals mostly opt for enlightened sources of information in an effort to reach informed decisions.

Our study is not without limitations. First, the two online surveys slightly differ in their design. Though these differences match the real-world development of a direct democratic campaign and, thus, reinforce external validity, we need to be cautious about temporal comparisons. Second, given the operationalization of our information boards, we neglected the role of credibility perceptions in information selection (Metzger et al., 2020). Third, this study assumes, rather than test, the theoretical expectation that individuals experience cognitive discomfort, i.e., confirmation bias, or favor ingroup pieces of information, i.e., ingroup bias, (Metzger et al., 2020). Fourth, our findings might be contingent on this specific referendum context where two-thirds of respondents were undecided before the campaign, as well as on the Swiss context in general. Hence, we cannot exclude the possibility that results may look different in other campaigns, i.e., on different (or more) issues, or in other countries.

Despite these limitations, our research design provides reliable results about the relative importance of the enlightened information strategy and the role of attitude strength in the choice of an information selection strategy in a referendum campaign. Given referendums' increasing importance in many democracies, measuring cogni-



tive discomfort and/or ingroup favoritism, and linking information selection to opinion formation should be next on this agenda.

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**Data Availability** The authors confirm that the data supporting this study’s findings (<https://doi.org/10.23662/FORS-DS-952-2>) and the replication files ([https://github.com/ZumofenG/P1\\_SelectiveExposureReferendums/blob/main/stats/dofile\\_SWReferendums\\_2021.do](https://github.com/ZumofenG/P1_SelectiveExposureReferendums/blob/main/stats/dofile_SWReferendums_2021.do)) are available online.

**Conflict of Interest** This manuscript has not been published and is not under consideration for publication elsewhere. We have no conflicts of interest to disclose.

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