

The psychology of electoral mobilization: a subtle priming experiment

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ABSTRACT

In this paper we test the idea that citizens can be stimulated to vote in an election via subtle psychological processes, which have little or nothing to do with the act of voting as such. More specifically, we argue that presenting voters with stimuli that induce an active mood will increase their tendency to vote. We conducted an experiment to test our ideas. Participants were subtly primed by giving them a campaign leaflet that contained a word puzzle, which included words that are associated with either action or inaction. The results indicate that subtly primed participants in the action condition reported stronger voting intentions than those in the inaction condition. These findings suggest that individuals can indeed be stimulated (or inhibited) to vote through subtle psychological processes. We discuss the implications of our results for the study of voting behaviour as well as campaigns aimed at electoral mobilization.

Introduction

There is presumably no form of political behaviour that has received more scholarly attention than the act of voting. Researchers have identified numerous factors that influence citizens' decision to vote or abstain, including many individual-level characteristics of voters as well as a range of contextual factors related to the political and electoral system (for reviews and a meta-analysis, see Harder and Krosnick 2008; Smets and van Ham 2013). Furthermore, many experimental studies have been conducted to assess the effectiveness of campaign activities that are aimed at increasing electoral turnout, such as direct mail, door-to-door canvassing, and phone calls (for a review and meta-analysis, see Green, McGrath, and Aronow 2013). The interventions that have been studied in these experiments vary in many ways, but usually have one feature

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in common: there is no doubt about the fact that the aim of the stimuli presented to citizens is to mobilize voters. In this paper we shift our attention to another way in which voters may be stimulated to vote, namely through subtle priming. We argue that the decision to vote is influenced not only by thoughts and feelings about the political parties and their candidates or the act of voting, but also by psychological processes that seemingly have little or nothing to do with politics per se and which citizens do not associate with voting. More specifically, whether individuals are in an active or passive mood, which may be influenced by a whole range of non-political factors, can influence their decision to vote. If we increase our insight in such psychological processes, which we have attempted to do with an experiment that is presented in this paper, this opens up fascinating new possibilities for campaigns aimed at electoral mobilization.

The best-known studies that focus on attempts to increase electoral turnout are undoubtedly the seminal field experiments in the United States described by Gerber and Green (2000, 2001) and Green and Gerber (2008). They assessed the impact of a wide range of get-out-the-vote activities, such as door-to-door canvassing, leafleting, direct mail, electronic mail, and phone calls. Although the evidence was sometimes mixed and not all findings have remained unchallenged, the overall image that emerges from these studies is that such activities do have an effect, although the size is limited, and more a personal approach has a better chance to affect voters than an impersonal approach (Green and Gerber 2008). In local elections, too, such mobilization effects have been observed (Gerber, Green, and Nickerson 2003). Furthermore, the effects of such campaigns are not limited to citizens that are contacted but spread towards other members in the same household (Nickerson 2008). Moreover, many such effects have also been observed in other political contexts (e.g. John and Brennan 2008; Fieldhouse et al. 2013). For example, Karp and Banducci (2007) found no substantive differences between older and newer democracies regarding the electoral mobilization of citizens by political parties. However, there are also indications that mobilization effects differ across contexts. For example, certain mobilization effects may be stronger in candidate-centred elections than in party-centred elections under proportional representation (Karp, Banducci, and Bowler 2007). Although much is known, there is still a need in particular for systematic comparative research about mobilization effects (Green and Gerber 2008).

There are also other ways in which the study of voter turnout may be advanced. In this paper we focus on one particular aspect, namely the underlying psychological mechanisms. One of the reasons that the explanatory power of models of voting is still limited, we argue, is the fact that voting, like other types of behaviour, is influenced by subtle psychological processes that have largely been neglected by electoral researchers. In this paper we

therefore seek to enhance our understanding of such psychological processes and their effect on electoral participation. More specifically, we argue that non-political events and stimuli may increase or decrease the state of activism in citizens – in other words, create a more active or passive mood – which in turn affects their tendency to vote. We test these ideas, which are elaborated in the next sections of this paper, in an experimental study that was conducted before local elections were held in Germany. We presented participants with a campaign leaflet that included a word puzzle that contained words that are associated with either action or inaction. The type of words that were included in the word puzzle had an effect on the strength of voting intentions that participants reported, even though none of the participants consciously made the connection between the nature of the stimulus and the election. We refer to this as subtle priming.

From here the paper proceeds as follows. In the next section we elaborate on the explanation of electoral turnout with a special emphasis on the underlying psychological processes. The following section focuses on subtle priming and discusses research that shows that attitudes and behaviour can be influenced outside individuals' conscious awareness. Next we present our experimental study and discuss the results. In the final section we draw conclusions about what this experiment tells us about the psychological processes that influence voting decisions, discuss the relevance for mobilization campaigns, and sketch some avenues for future research.

Explaining electoral turnout

Political participation has been central in political science for a long time and has been focused on in several seminal works (e.g. Barnes and Kaase 1979; Verba, Schlozman, and Brady 1995). The most popular form of political participation, and a fundamental one in many theories of democracy, is the act of voting (Dahl 1989; Lijphart 1997). So it is no surprise that much research has been conducted on party or candidate choice and voter turnout (for a review, see Van der Eijk and Franklin 2009). In this paper we focus on the explanation of the latter and are interested in the factors that influence citizens' decision to vote or abstain.

Electoral turnout can be studied in two different ways, namely at the individual or micro level and at the aggregate or macro level. The first approach focuses on the decision-making by individual citizens and typically addresses the question why some people vote whereas others abstain, or why people vote at all (Ferejohn and Fiorina 1974; Blais 2000; Geys 2006). The second approach focuses on the turnout rates in elections and typically addresses the question why turnout rates are higher in some countries or in some elections as compared to others, or why turnout has declined in the past decades (Franklin 2004). Some studies combine both approaches and look at how

individual-level and system-level characteristics interact with each other (Anduiza Perea 2002). In this paper we are interested in the individual-level perspective and focus on factors that influence citizens' decision to (not) vote when an election is coming up.

In a meta-analysis based on 90 articles from 10 different journals in political science, Smets and van Ham (2013) identified a large set of variables that have been put forward as explanatory factors in models of voting. These included several individual-level variables that they labelled "psychological", such as party identification, political interest, and satisfaction with democracy. Whereas these three variables have a clear link with politics, Smets and van Ham also analysed psychological variables that have nothing to do with politics as such, like mental health, trust in others, and a hardworking personality. Although the first two did not have a significant impact on turnout, the latter did. This nicely illustrates that electoral behaviour is also influenced by non-political factors. One of the reasons that the explanatory power of models of voting is rather limited is that such factors have been largely neglected by electoral researchers. We probably have a fairly good idea of the political factors that influence the act voting, but our understanding of the more general psychological processes that have an impact on the decision to vote or abstain is rather limited.

Previous research has shown that one of the factors that influence the chance that citizens cast a ballot is the degree to which they are, more in general, active or inactive (Noguchi, Handy, and Albarracín 2010). This means that factors that influence people's level of activity will also influence their tendency to vote. The level of activity may be conceptualized not only as a stable personality characteristic, but also as a temporary mood (or as a combination of both). If we assume that a person's level of activity is not (only) a long-term stable characteristic, but may vary from day to day (and also within a day), and if the general level of activity influences the tendency to vote, this leads to interesting expectations about what moves voters and also about the potential for mobilization campaigns. This is relevant in the light of the fact that a substantial part of the electorate hesitates about whether to vote or not and appears to decide last minute (Van der Kolk, Aarts, and Rosema 2007).

In an intriguing laboratory experiment, Noguchi, Handy, and Albarracín (2010) studied the psychological processes related to individuals' level of activity in the context of the 2008 U.S. Presidential Elections by focusing on a prime that is unrelated to politics. They asked participants to do a task in which they had to complete 20 word fragments, of which 12 were neutral and 8 were related either to action concepts (e.g. *active, doing, making*) or to inaction concepts (e.g. *calm, freeze, pause*). They found that participants in the action condition reported significantly stronger political participation intentions than participants in the inaction condition (the dependent variable was a measure that combined voting, campaigning, and influencing others).

This illustrates that voters may be influenced by factors that as such have nothing to do with politics and which they do not associate with the act of voting. We refer to these as subtle psychological processes.

One might argue that *activity* is just one more variable to explain voter turnout. However, we believe that this concept is very valuable to show the potential of subtle influence in political participation. In other domains, such as clinical psychology and psychiatry, the notion of an active mood has often been used, especially in relation to low mood or depression and related disorders (e.g. Wilkins et al. 2006). In the emotion literature moods, as well as emotion episodes, have often been conceived of as a combination of a pleasant–unpleasant dimension and an arousal–calm dimension (Mayer et al. 1991). In the political science literature, the notions of active and passive are presumably most strongly associated with Barber’s (1992) study of presidential character, in which he analysed personality in terms of positive versus negative and active versus passive. Whereas his study conceived of the active–passive dimension as a stable personality characteristic and focused on political elites, in this paper we focus on temporary moods and the mass level. The main hypothesis is that being in an active or inactive mood influences the decision to vote or abstain and this mood is influenced by subtle psychological processes. In the next section we elaborate further on how a person’s mood may be influenced through subtle priming.

Subtle priming

Attempts to persuade people are often obvious, because both the attempt and the aim are clear. Campaign activities funded by the government to call for citizens to vote are a clear example, as are most of the interventions studied in the aforementioned get-out-the-vote experiments (Green and Gerber 2008). However, much persuasion takes place in more subtle ways. For example, supermarkets influence consumer behaviour on the basis of the direction people walk (clockwise or anti-clockwise) and background music. The fact that subtle mental processes are important in affecting human behaviour has been shown by studies for more than 100 years on a wide range of topics (Dijksterhuis, Aarts, and Smith 2005), including voting behaviour (Bargh 2006). However, despite that it seems obvious that subtle influence can also play a role in electoral participation, this has mostly been neglected in studies of voter turnout.

Numerous experimental studies have demonstrated the power of subtle processes in many domains on multiple dependent variables, including for example arousal (Dutton and Aron 1974), attitude formation (Zajonc 1968), and actual behaviour (North, Hargreaves, and McKendrick 1999, 274). The primes can consciously be detected by the participant, but they are not consciously linked to the dependent variable. This feature of subtle processing is

quite different when comparing it with the most invisible form of persuasion: subliminal influence. Participants in subliminal conditions are exposed to a stimulus (prime), such as a word, a photo, or the immediate presentation of a mask (such as a letter string) before measuring an attitude or behaviour. However, the stimulus is presented for such a short time that individuals are not consciously aware that it was presented – usually between 20 and 40 ms (Fennis and Stroebe 2010, 88). While subtle priming is very common in the social world and well known from advertising, subliminal priming is presumably less widespread and typically carried out in the laboratory (Lodge and Taber 2013). However, there are examples of such attempts to influence voters (Hassin et al. 2007). The best-known example is the prime in a TV commercial of the Republican Party in the 2000 U.S. Presidential Elections, in which the word “RATS” was flashed for some milliseconds near the word Democrats (Weinberger and Westen 2008).

In this paper we focus solely on subtle priming and neglect subliminal influence. Such effects may also occur without a deliberate attempt to influence voting behaviour. For example, one study showed that election outcomes in the United States were affected by how local college football teams performed shortly before the election: when those teams had just won their game, the incumbent governor, senator or president received on average 1.6% more votes than when the team had just lost or tied (Healy, Malhotra, and Mo 2010). Other research showed that the nature of a polling place (e.g. church or school) can have an effect on the support for specific candidates in mayoral elections and the support for specific policy proposals put forward in a referendum (Berger, Meredith, and Wheeler 2008; Rutchik 2010). Although much of this type of research has been conducted in the United States, there is no reason to believe that the effects are limited to that context. A recent paper by Fatke (2015), for example, reports comparable effects of the polling location in a referendum and election in Germany.

To increase our insight in the effects of priming on voter turnout, it is important to conduct further experimental research, to carry out these studies in different countries and contexts than the United States, use samples that are more heterogeneous than the popular college student samples, and design them in ways that reflect real life more closely than lab studies sometimes have done. With these considerations in mind we conducted an experiment to explore the potential effects of priming with action and inaction words on voter turnout.

Methods

The aim of this study is to uncover the effects of action words and inaction words on electoral turnout through subtle priming. So while the action/inaction words are consciously processed, the participants do not consciously link

these stimuli with the target variable. In line with the call for more experiments in other political contexts than the American one (Green and Gerber 2008), we conducted our experimental study in Germany, the largest established democracy in Europe, and focused on the municipal elections in September 2011. There are two reasons that local elections are particularly interesting. First, this adds to the desirable heterogeneity of the political contexts in which electoral research is conducted, because most research is done around national elections. Second, in national elections the level of turnout tends to be fairly high which, due to ceiling effects, increases the probability that the effects of experimental stimuli are relatively small. In local elections in Germany, on the other hand, the level of electoral turnout is usually close to 50%, which leaves more room for effects of all kinds of variables.

Unlike the study of Noguchi, Handly, and Albarracín (2010), which was conducted in the lab, we extended the experiment to a more natural environment. Instead of asking participants to sit behind a computer in a lab, we asked them to read a printed campaign leaflet at their home. To advance our understanding of political processes, it is important that experiments are conducted in settings that reflect real life as closely as possible (Barabas and Jerit 2010). Instead of asking participants to complete a set of letters that could be completed into words associated with action or inaction (the prime used by Noguchi, Handly, and Albarracín 2010), we primed participants with similar words by including them in a word puzzle. Although a word puzzle is not a feature one immediately expects in a campaign leaflet, we believe that this is a more natural way of presenting words than the task administered in the study with which we make the comparison. Moreover, the advantage of a word puzzle is that it can be used in many different contexts for priming all sorts of concepts. Finally, whereas the experiment by Noguchi, Handly, and Albarracín (2010) focused on introductory psychology students, our sample is more heterogeneous (see below).

Hypotheses

We expected that there would be a significant difference between participants who would process action words versus inaction words in terms of their attitude towards voting and their voting intention. We distinguish between attitudes and intentions, which is common in social psychology (Ajzen and Fishbein 1980; Fishbein and Ajzen 2010), because in theory it is possible that attitudes are affected whereas intentions are not or vice versa – given the causal chain in attitude–behaviour models the reverse is not likely, but in theory it is possible.

With respect to the impact of the prime of action versus inaction words, we formulated the following hypothesis:

H1: Participants who are primed with action words will report a more positive attitude towards voting in the upcoming election than participants who are primed with inaction words.

With respect to voting intentions, we base our expectations on findings in the previous laboratory experiment and hypothesize that action words can affect behavioural intentions regarding voting, leading to the following hypothesis:

H2: Participants who are primed with action words will report a stronger intention to vote in the upcoming election than participants who are primed with inaction words.

Design and procedure

To test the above hypotheses, we conducted an experiment with a two-group design to compare the effects of action words and inaction words in a real life election environment, namely before the German municipal elections in 2011. Ensuring that participants would see and therefore consciously process all priming words before measuring the dependent variable, we used two word puzzles. In these puzzles we included either the action words or inaction words, depending on the experimental condition. To minimize the likelihood that participants would consciously link the stimuli with the measurement, we included each word puzzle in a leaflet that gave general information about the municipal election (the leaflet is available in online Appendix C).

At the residence of the participants, the six-step procedure was as follows:

- 1) Participants were briefed on the research project and asked to participate. To ensure that the target group would not be informed about the goal of the research, a cover story was used, that is, that the usability and layout of new campaign material would be evaluated. Besides, the participants were told that they had to complete a word puzzle to test its ease of use.
- 2) Participants were asked to peruse the leaflet and to comment on its layout and usability and briefly discuss a few salient points. Though unimportant to answer the research question, this was necessary to cover the real prime and to ensure participants would not link the prime with the measurement of the dependent variable.
- 3) Participants had to solve the word puzzle requiring them to use the action or inaction prime depending on the randomly assigned experimental condition. The researcher checked that all words were recognized by the participants and marked on the list beneath the puzzle, while following the order of the list with the neutral words at the beginning and at the end of the puzzle.
- 4) Participants had to complete the survey, which had been pre-tested.

- 5) Participants had to recall the words they remembered from the word puzzle in a free-recall test. Correct words were noted by the researcher and the number of correct recalls was added to the data while differentiating between priming words and neutral words.
- 6) Participants were finally asked whether they had an idea what the real intention and design of the experiment was about, for example, what the relation between the word puzzle and the survey could be. The objective of this semi-structured conversation between researcher and participant was to find out whether people linked the prime with the measurement of the dependent variable.

Priming words

Noguchi, Handly, and Albarracín (2010) used the action words *go* and *move* and the inaction words *relax* and *stop* in their laboratory experiment. We also used these four words in our experiment and extended them with similar action and inaction words to increase the total number to five: *go*, *move*, *jump*, *join*, and *run* as the “action words” as opposed to *relax*, *stop*, *hold*, *pause*, and *rest* as “inaction words”. Furthermore, four “neutral words” were added to the puzzle: *river*, *sky*, *waterfall*, and *wheel*. This was also done in earlier subliminal and unconscious priming studies where neutral words were used to cover the stimulus (Bargh et al. 2001; Dijksterhuis, Aarts, and Smith 2005; Weinberger and Westen 2008; Noguchi, Handly, and Albarracín 2010). Furthermore, because people’s short-term memory storage capacity in word-tasks is limited to about three to seven items (Smith and Kosslyn 2009), the use of neutral words will increase the chance that participants will not remember the priming words consciously when measuring the independent variable. Also, neutral words are useful to cover the positive and negative primes due to the so-called “serial position effect”. By confronting the participants with neutral words at the beginning and at the end of the stimulus, it is more likely that they remember these words instead of items presented in the middle (Murdock 1962). Therefore, two neutral words were placed at the beginning and at the end of the puzzles (see online Appendix C).

Dependent variables

Based on earlier studies we not only included the concepts *attitude towards voting* and *intention to vote* in our analysis (cf. Brader 2005; Noguchi, Handly, and Albarracín 2010), but supplemented these with *attitude towards getting informed about the election* and *intention to get informed about the election* (Brader 2005) as dependent variables. For the measurement of the each of the four concepts, we used two items. An example of the

measurement of the *attitude towards voting* is the item “I consider it important to vote in the upcoming municipal election”, while an example for the measurement of *intention to vote* is “I will go to the polls in the upcoming municipal election” (see Appendix A for the question wordings). The response scale included six answer options: strongly disagree, disagree, tend to disagree, tend to agree, agree, and strongly agree (coded on scale from 0 to 5). We created a scale for each of the four concepts by taking the mean value of the two items (Cronbach’s α for the resulting scales were as follows: attitude towards getting informed, $\alpha = .80$; attitude towards voting, $\alpha = .86$; intention to get informed, $\alpha = .57$; intention to vote, $\alpha = .98$).

Participants

Because we had decided to conduct the experiment at participants’ home, it was impractical to spread them across the whole country. For pragmatic reasons, we recruited participants in the German town Neuenhaus in Lower Saxony, a small town close to the Dutch border. In terms of demographics and political profile, this town resembles Germany at large fairly well (see online Appendix B). To ensure heterogeneity in our sample, the participants were approached in different areas of the electoral district, on different days of the week, and at different times of the day, throughout the month of May 2011. About 1 in 10 agreed to participate. The experiment usually lasted for about 15 minutes.

A total of 62 people, aged between 16 and 90 ($M = 43.7$, $SD = 17.2$) participated in the study of which 55% was female and 45% was male. Asked in a questionnaire about their party affiliation, 61% reported a party and 39% indicated that they felt close to none of the political parties; 73% indicated that they had voted in the previous municipal election, whereas 27% had abstained.¹ The participants were randomly divided into two groups: 31 participants were primed with action words and 31 participants were primed with inaction words. We compared the groups in terms of gender (male or female), age (average in years), partisanship (identifier or non-identifier), and previous voting behaviour (voted or abstained in the previous municipal election) of

¹In the context of national elections in Germany, the percentage of voters who reported a party affiliation has long been about 70% (see Garzia 2013). The German Longitudinal Election Studies conducted before and after our own study report comparable levels of partisanship, with the figure for 2009 being 68% and the figure for 2013 being 73%. The actual level of turnout for the municipal elections in Lower Saxony in 2006 was 52% (source <http://www.nls.niedersachsen.de/KW2006/999k.html>, consulted on 15 January 2015). Such discrepancies between actual turnout levels and figures reported in surveys are well known and the result from a combination of factors (Selb and Munzert 2013). Given that in this study we do not use survey data to compare voters with non-voters, but instead analyse the effect of an experimental treatment on voting intention, then the impact of this reporting bias is less of a problem than in observational studies. However, we do accept that it is possible that those citizens who are more strongly inclined to abstain are not included in our sample. Thus, we cannot draw any conclusions about potential mobilization effects among that (relatively small) group.

the two experimental groups and found no statistically significant differences, so we concluded that the random assignment had been successful.

As indicated above, at the end of the experiment participants were asked about their ideas of the true purpose of the experiment. None of them referred in any way to the potential effects of the word puzzle on attitudes or intentions regarding the election. So, none of the participants seemed to be aware of the real purpose of the experiment. This substantiates our idea that if the hypothesized effects are found, these occurred outside the conscious awareness of participants. This does not mean that the participants were not aware of the word puzzle or its words as such – it is difficult to know exactly what is and is not conscious per se (see, e.g. Hassin, Uleman, and Bargh 2005) – but their responses suggest that participants were unaware of how these stimuli might have affected their subsequent attitudes and behaviour in the electoral domain.

Results

The results, which are presented in Table 1, show that participants who were primed with action words reported, on average, more positive attitudes towards getting informed about the election and more positive attitudes towards electoral participation than participants who were primed with inaction words. They scored about half a point higher on the scale with values ranging between 0 and 5. For the first measure, this effect was statistically significant at the conventional level ($p < .05$), while the second effect almost was as well despite the relatively small sample size ($p = .06$). This means that the findings lend support, at least partially, to Hypothesis 1. Priming with action words versus inaction words in the word puzzle had an effect on the attitudes that participants reported.

We now shift our attention to behavioural intentions. Are the effects limited to attitudinal measures, or can similar effects also be observed with respect to the strength of the intention to vote? The findings reported in Table 2 show that participants who were primed with action words indeed reported stronger behavioural intentions regarding becoming informed about the election and the act of voting than participants who were primed

Table 1. Effects of the action/inaction prime on attitude towards getting informed about the election and attitude towards voting (results of *t*-test).

	Action prime (<i>n</i> = 31)	Inaction prime (<i>n</i> = 31)	Significance (one tailed)
Attitude towards getting informed	<i>M</i> = 3.47 SD = 1.01	<i>M</i> = 2.79 SD = 1.14	<i>t</i> = 2.48 (df = 60) <i>p</i> = .008
Attitude towards voting	<i>M</i> = 4.16 SD = 0.98	<i>M</i> = 3.68 SD = 1.40	<i>t</i> = 1.58 (df = 60) <i>p</i> = .060

Note: *M* = mean; SD = standard deviation; df = degrees of freedom; *p* = significance level.

Table 2. Effects of the action/inaction prime on intention to get informed about the election and intention to vote (results of *t*-test).

	Action prime (<i>n</i> = 31)	Inaction prime (<i>n</i> = 31)	Significance (one tailed)
Intention to get informed	<i>M</i> = 2.81 SD = 1.05	<i>M</i> = 2.29 SD = 1.30	<i>t</i> = 1.73 (df = 60) <i>p</i> = .045
Intention to vote	<i>M</i> = 4.23 SD = 1.01	<i>M</i> = 3.45 SD = 1.58	<i>t</i> = 2.30 (df = 60) <i>p</i> = .013

Note: *M* = mean; SD = standard deviation; df = degrees of freedom; *p* = significance level.

with inaction words. Again, participants in the action condition scored about half a point higher on the scale and both effects were significant at the conventional level of statistical significance ($p < .05$). This lends support to Hypothesis 2. The primes that were presented by using different words in the word puzzle resulted in differences in the intentions reported by the participants in the experiment.

The *t*-test that we used assumes a normal distribution and homogeneity of variance of the variables. For three of the four variables, these conditions were not fully met (which is understandable because of potential ceiling effects). Therefore, we also analysed the differences between both experimental groups with a *t*-test that does not assume equal variance and with a non-parametric test, the Mann–Whitney *U*-test, which focuses on the median instead of the mean (Moore and McCabe 2008). In all instances, the coefficients of the *t*-test were identical and the results of the Mann–Whitney *U*-test were also similar: the level of statistical significance was virtually identical to the values reported for the *t*-test in the current tables ($p < .05$, except $p < .10$ for attitude towards voting). So the findings appear to have not been affected by a violation of those underlying assumptions.

It is possible that the answers by participants to the items about voting have been influenced by social desirability, which is one of the reasons that electoral turnout tends to be relatively high among survey respondents when compared to election statistics (Holbrook and Krosnick 2010). However, in as far as responses have been influenced by such tendencies, one would expect this to happen in both experimental conditions and hence this should not affect the differences that we observe between both experimental groups.

So, the results of the experiment show that subtle influence on voting intentions indeed occurs when participants consciously process information (words in the puzzle) that they do not associate with voting. This study thus provides evidence that subtle priming works with respect to electoral behaviour. When primed with words that are associated with action (e.g. *move*, *jump*, *run*) instead of words that are associated with inaction (*stop*, *pause*, *relax*), participants reported a stronger desire to become informed about the election and a stronger intention to vote. This happened outside the

awareness of participants, because none of them realized that the word puzzle was used as priming stimulus. These findings support the results of Noguchi, Handly, and Albarracín (2010), who reported a similar effect of the priming of action words on three aspects of political participation in a lab experiment in the United States; while their study reported effects of about one point on a scale from 1 to 10, in our study, the effects are about half a point on a scale from 0 to 5. This means that in neither study the prime converted likely abstainers into likely voters, which would of course have been very odd, but given the subtleness of the primes we consider the size of the effect still remarkable.

Conclusion

In this paper we have analysed the effect of subtle psychological processes on voter turnout by means of an experiment, which was conducted in Germany before local elections were held. We presented participants a campaign leaflet that included information about the upcoming election as well as a word puzzle, which they were asked to complete. We have shown that if citizens were primed through the word puzzle with words that are associated with action (e.g. *run, move*) they reported stronger intentions to vote in the upcoming election than if they were primed with words that are associated with inaction (e.g. *pause, relax*), even though none of the participants consciously associated the prime with the effect on turnout. These findings lend support to the theoretical idea that the decision to vote or abstain is influenced by the degree to which citizens are in an active or passive mood. This mood can be influenced through subtle priming, so by presenting stimuli that people do not consciously associate with the act of voting.

The findings of our study are comparable to those of a lab experiment in the United States, which focused on the presidential elections (Noguchi, Handly, and Albarracín 2010). To make the experiment less artificial, we conducted the study at the participants' home instead of in the lab. In such a more natural setting, the behaviour of participants is more likely to be similar to their normal behaviour, which is exactly the reason that field experiments are often preferred above lab experiments (Gerber and Green 2008). Furthermore, our sample was more heterogeneous than the sample of psychology students in the study by Noguchi, Handly, and Albarracín (2010). The fact that the effect sizes in our experiment are fairly similar to the effects found by Noguchi, Handly, and Albarracín (2010) despite the many differences between both studies boosts our confidence in the robustness of the effects of action/inaction words. However, this does not mean that in our experiment, there are no methodological issues or concerns. One of the main questions is how long effects like those observed in our study last, and if they also lead to higher actual turnout levels among the participants

who were primed with action words. In our study we were not able to observe this and hence future research will have to show to what extent this happens. We also acknowledge that in other contexts the effect may differ. More specifically, we expect that in elections where the level of turnout is much higher, smaller or no effects may be observed.

An important question that arises is what these findings tell us about reality. After all, not many citizens will complete a word puzzle with action or inaction words shortly before the election. However, we conducted this study not because we are interested in action words as such, but because they are a means to assess the relevance of subtle psychological processes more in general, and the notion of an active mood in particular, for electoral turnout. The main relevance of the experiment is that it shows that the decision to vote or abstain is influenced by psychological processes that concern factors that have nothing to do with politics; a person's mood (active/passive) is one of them. Surely, many voters are strongly committed to voting whereas others are firm in their decision to abstain. For such voters, there is not much room for the influence of such subtle psychological processes. However, many voters are in-between and whether they vote or abstain may depend on what happens in their life and this may have nothing to do with politics. If a weak stimulus like action words or inaction words in a puzzle can already have an effect, one can only imagine how strong the effect would be of events that are much more significant to the individual. Events that make people feel more depressed will probably lower the chance that they vote, while events that make people feel energetic will increase their tendency to vote. This is the type of process that our experiment illuminates.

The concept of action/inaction can help to interpret findings from previous research about voter turnout. For example, some studies have shown that there is a relationship between weather conditions and level of turnout (Gomez, Hansford, and Krause 2007; Eisinga, Te Grotenhuis, and Pelzer 2012). There are several mechanisms that one may come up with that contribute to this correlation. One could be that rain depresses turnout while sunshine stimulates turnout because the weather influences the mood that people are in, which in turn affects turnout. In previous studies, the negative effect of rain on turnout was interpreted in terms of theories about the costs and benefits of voting, but this is not the only possible mechanism.

The findings of our experiments lead to several questions that can guide future research. We would like to emphasize a couple of questions that we hope future research will focus on. First, in our experiments, the stimuli were very weak. It would be interesting to replicate this type of experiment with much stronger stimuli and examine what happens if citizens' mood becomes much more active or much less so. We do not want to encourage colleagues to bring participants of their studies into a state of deep depression

(or euphoria, for that matter), but a small step in that direction would be welcome. Second, it is worth examining how long such effects last and if they transfer to actual behaviour. In our studies we focused on voting intentions, but future research may expand the dependent variables and also examine actual turnout. To fully explore this matter, we also need to have more insight in the moment that voters make their decision to vote or abstain. Furthermore, an interesting question is how such insights can be used in campaigns aimed at electoral mobilization. We are not saying that campaigns should forget about political factors from previous get-out-the-vote activities, but it may be a good idea to supplement such campaign actions with innovative initiatives that build on insights about the impact of subtle psychological processes. Finally, apart from the notion of an active mood, there may be other concepts that are useful for understanding how psychological processes that have nothing to do with politics may influence voter turnout. This area has not yet been deeply explored and therefore fascinating and useful insights can still be gained.

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No potential conflict of interest was reported by the authors.

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Appendix A: Question wordings

The survey items that were included in the questionnaire that participants completed at the end of the experiment are listed in [Table A1](#).

Table A1. Survey questions used to measure attitudes and behavioural intentions.

<i>Attitude towards getting informed</i>	<i>Attitude towards voting</i>
I think it is important to collect more information about the municipal election	I consider it important to vote in the upcoming municipal election
I am interested in getting more information about the upcoming municipal election	I believe it is good to go to the polls in the next election
<i>Intention to get informed</i>	<i>Intention to vote</i>
I will search for more information about the upcoming municipal election	I will go to the polls in the upcoming municipal election
I will collect additional information about the upcoming municipal election	
I will vote in the upcoming municipal election	