Losers lose more than winners win: asymmetrical effects of winning and losing in elections

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Abstract

Being on the winning or the losing side in elections has important consequences for voters’ perceptions of democracy. In this paper, we contribute to the existing literature by showing that the effect of being on the losing side has persistent effects over surprisingly long time. Based on a dataset that measures voters’ satisfaction with democracy three years after elections were held, we first show that losers are significantly more dissatisfied with democracy than winners on both input and output side measures of perceptions of democracy. We further show that turning from winning to losing has significant negative effects on voters’ satisfaction, and that this finding is robust across a number of different specifications. These results are remarkable given that we use data from Denmark, a country that constitutes a least likely case for finding effects of being on the winning or the losing side.
Introduction

A large literature documents that being on the winning or the losing side in elections affects how voters perceive democracy and their political life after elections. Studies have consistently found that losers are more likely to be dissatisfied with democracy, that they trust the governing institutions less, that they find the political system less responsive and are more likely to perceive the political system as corrupt (Anderson and Guillory 1997; Anderson and LoTempio 2002; Anderson et al. 2005; Birch 2008; Blais and Gélineau 2007; Marien 2011; Curini, Jou, and Memoli 2012; Herreros and Criado 2007). Thus, being on the winning or the losing side in elections seems to have important consequences for how a voter perceives democracy and ultimately the legitimacy of the political system (Anderson et al. 2005; Nadeau and Blais 1993; Norris 1999). Knowing if loser dissatisfaction extends beyond a few weeks or months after an election is important because it helps us understand the roots of discontent with democracy at large.

Our study contributes to this literature by investigating the persistence of voter satisfaction with democracy over time. Most current studies rely on survey data collected shortly after elections, which raises concerns about whether differences between winners’ and losers’ satisfaction with democracy are an ephemeral phenomenon. If the effect of losing is not extended in time, we should probably be less worried by such differences, compared to a situation where the differences are persistent and identifiable over longer stretches of time. We address this question by examining if differences between winners and losers persist three years after elections.

The paper proceeds as follows. First, we review the literature on what has been labeled the winner-loser gap in satisfaction with democracy. We argue that we need to examine the long-term effects of winning and losing, as the current literature has not addressed how persistent the effects are. Next, we present our research design and data, which consists of two rounds of surveys conducted near the end of two election periods, that is, approximately three years after an election. In the empirical analysis (and our conclusions), we show that losers are more dissatisfied with democracy and that voters who turn from being winners to being losers become less satisfied with democracy, measured

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using both input side and output side measures. In sum, we find that losers are consistently less satisfied with democracy than winners three years after the election was held. Turning from winning to losing has persistent effects on a voter’s satisfaction with democracy, while becoming a winner does not affect satisfaction with democracy. These results are robust across output as well as input measures of satisfaction with democracy. We conclude the paper with a discussion of how endowment effects potentially explain these asymmetrical patterns.

The winner-loser gap in satisfaction with democracy

The winner-loser gap literature has mainly focused on the gap in satisfaction with democracy between losers and winners in elections (Anderson et al. 2005; Norris 1999). There are good and obvious reasons for this: Satisfaction with democracy intends to measure the diffuse support of the political systems and therefore serves as a measure of how deep-seated democracy is (Easton 1965, 1975; Weatherford 1992). Substantial and different effects of supporting a winner or a loser are also found in well-consolidated democracies, and the effects of winner-loser persist across time and geography (see for example Norris 1999). It is important to understand the underlying dynamics of the winner-loser gap in consolidated democracies because it has consequences for a host of desirable features that make democracy function smoothly.

The literature on winner-loser effects is large and diverse. It can be categorized according to which characteristics have been considered most important in explaining variations in winners’ and losers’ satisfaction with democracy. The first line of research deals with the institutional underpinnings of satisfaction with democracy. The electoral system has attracted most attention because it determines – all things being equal – who will be losers and who will be winners. Anderson et al. (2005) and Anderson and Guillory (1997) show that the difference between winners and losers is less pronounced in proportional systems than in majoritarian systems. The logic explaining this result is straightforward: In majoritarian systems, the winner monopolizes power, and being a loser thus implies that the elites you support are effectively without power. In proportional systems, parties rarely lose power entirely, political elites typically engage in power sharing, and the political system is to a lesser extent monopolized by winners (Lijphart 1999). Bernauer and Vatter (2011) also find a direct link between satisfaction with democracy and the institutional setup. However, they argue that the relationship is due to the participatory and direct democracy features in proportional democracies. They show that these participatory elements affect losers much more than they affect winners, and this makes the authors speculate that there are probably other mechanisms at play in explaining why proportional democracies produce smaller gaps between winners’ and losers’
satisfaction with democracy. Magalhães (2016) extends this literature by showing that voters’ perception of the fairness of procedures has important implications for voters’ satisfaction with democracy. He reaches this result after controlling for the voters’ distance to the incumbents, which we take to (indirectly) reflect loser status.

A second line of research investigates the extent to which winner-loser effects are robust across elections and across different levels of governance. Using a rolling campaign cross-sectional survey from the Canadian Election Survey, Blais and Gélineau (2007: 428) find clear winner-loser effects even at the local level. They are able to compare voter satisfaction with democracy before and after the election and find that it is conditional on whether the voter is optimistic or pessimistic about winning or losing. Voters who expect to win but who end up losing the election are more dissatisfied than everybody else. However, their study is not designed to investigate if the winner-loser effect is robust across several elections, so we do not know whether the expected results are found for voters who change status over several elections.

A third line of research broadens the research agenda by examining how winners and losers should be conceptualized. First, Esaiasson (2011) argues that the literature has misconceptualized winners and losers because the underlying mechanism has been misspecified. According to Esaiasson, satisfaction with democracy flows from two sources. In the winner-loser gap literature, only the source creating negative feelings is modeled; these feelings are generated by losing. The second source produces positive feelings towards democracy and stems from democracy being an accepted method for handling conflict. Esaiasson argues that provided that the winning majority follows simple democratic rules, we should not expect to find a winner-loser gap. Second, Curini, Jou, and Memoli (2012) and Curini and Jou (2016) argue that distances in policy space are important for the winner-loser gap, thereby adding that winner-loser status might not be best conceptualized as a simple dichotomy. They propose that the distance in policy space between the voter and the candidate or party that won the election determines the size of the effects on satisfaction with democracy. Using CSES data for 31 countries, they show that the distance between a losing voter and the cabinet has important effects on voter dissatisfaction with democracy, so that the closer the loser is in policy space to the winner the less dissatisfied the loser will be. Third, Singh, Karakoç, and Blais (2012) also investigate the extent to which winners can be perceived to constitute a homogeneous group, and argue that there are important differences between winners. Most importantly, they argue that winning could mean gaining power or gaining votes without gaining power. Based on data from North Rhine-Westphalia, they show independent effects on voters’ satisfaction with democracy when their party wins seats or when their preferred party gains power. Hence, the effects of satisfaction with democracy are not limited to voters who see their preferred
party gaining power. Finally, Anderson and Mendes (2006: 107) show that persistent losers are more likely than winners to engage in protest behavior and that the protest potential for losers declines in more established democracies. Hence, voters who persistently lose tend to have more protest potential than losers who might gain access to power.

As this brief review has shown, the winner-loser literature is large and still developing. However, the current literature has not addressed whether the effects of winning or losing are persistent across time. Consequently, we do not know if the winner-loser gap is an ephemeral or a more persistent phenomenon. If it can be shown that the effect of winning or losing in an election is only detectable a few months or years after an election, then the effect is much less relevant to political scientists compared to the situation where the effect is persistent over time.

Table 1 shows our expectations for winners and losers and relates them to the data presented later in the methods section. Voters are divided into four categories: WW: winners in both elections; LL: losers in both elections; LW: losers in the first and winners in the second election; WL: winners in the first and losers in the second election. In the cross-sectional dataset after the first election (second column), we expect WW and WL to have higher satisfaction, and LL and LW lower. After the second election (third column), we expect WW and LW to be positive and LL and WL to be negative. Finally, we expect the transition from winning to losing (and vice versa) to affect satisfaction (fourth column). As voters in WW and LL did not experience a change, we do not expect to see a change in satisfaction for these groups. However, LW changed from losing to winning, and we expect this to produce a positive effect on satisfaction. WL changed from winning to losing, and we expect this to have a (relatively larger) negative effect.

The case of Danish local government
Before we turn to methodological issues, we briefly introduce the Danish case. Danish democracy enjoys a long and strong tradition and has not been contested since 1920. Losers can be confident,

\[\text{In 1920, the King tried to force Parliament to call a new election after the Social Liberal Party (Radikale Venstre) had formed a government. The Prime Minister declined and the King fired him, which was unconstitutional given that only Parliament can fire a prime minister. The government formed by the King}\]
by all reasonable standards, that they have a chance of winning an upcoming election. Furthermore, Danish municipal politics and elections are highly consensual (Serritzlew, Skjæveland, and Blom-Hansen 2008) and losers are likely to be included in the decision-making process through coalition bargaining. The Danish municipalities therefore constitute the most consensual part of a highly consensual democracy. The electoral system in Danish municipalities is highly proportional, which should further decrease the likelihood of observing differences between winners and losers (see O’Leary, Grofman, and Elklit 2005). Furthermore, local elections are normally considered second-order elections (Reif and Schmitt 1980), which means that voters should care much less about being on the winning or the losing side. Thus, if we find differences between winners and losers in a Danish context using data from local elections, it seems reasonable to expect positive findings to be conservative and replicable in other contexts where democracy is less deep-rooted. In other words, the Danish case is a least likely case for finding effects of status as winning or losing. In the next section, we explain our design and our identification strategy.

Elections take place in November every four years, most recently in 2017. Terms are fixed and run four years from January following the election. The local councils have between nine and 55 local councilors, and the mayor is elected by and among the local councilors, also for a fixed four-year term, and can only be replaced in extraordinary circumstances. Danish municipalities are responsible for important services (e.g. primary schools, child care, elderly care), and they administer more than 40 percent of total public expenditures, which entails that the municipalities take decisions that directly affect citizens. Effective January 2007, a large-scale local government reform, involving municipal mergers, a new division of tasks between levels of government and a reform of the inter-municipal financial equalization system, was implemented. 239 of the then 271 municipalities were merged into 66 new municipalities; 32 remained intact (for a description of the reform, see Mouritzen 2010). In the next section, we explain how we take this reform into account in the analyses.

**Data, design and methods**

Our data consists of two surveys conducted roughly three years after two municipal elections. The first elections were held in November 1997 for the election period 1998-2001 (election period starting in 1998, or just “E98”), and the first wave of interviews were conducted in March 2001. The

never met Parliament, and the King negotiated a solution with the opposition parties (see Kaarsted (1968) for a full treatment of the crisis).
second elections were held in November 2005 for the election period 2006-2009 (election period starting in 2006 or “E06”), and the second wave of interviews were conducted in April-July 2009. See Figure 1 below.

The survey in 2001 (see Danish State Archives 2006) is a two-stage stratified sample where the municipalities (of which there were 275 in 2001) were assigned to one of six strata according to population size. Ten municipalities were then selected from each using systematic sampling, and a simple random sample of respondents was selected in each using random number generation. The survey was conducted in March 2001 by Gallup in telephone interviews of 2,764 respondents in the 60 selected municipalities and a follow-up postal questionnaire administered to 2,442 (1,838 were usable, which yields a return rate of 67 percent). The response rate for the telephone interviews can be approximated to 59 percent (Houlberg and Pedersen, 2003). Gallup repeated the survey in April-July 2009 (see Danish State Archives 2011) and completed telephone interviews with 900 of the 2,764 respondents (distributed on all 60 municipalities with the number of interviews varying from seven to 24 per municipality). 1,718 were reachable, which yields a response rate of approx. 53 percent.

As a first step, we test whether status as winner-loser affects voters' evaluations of the input and the output side of the democratic system using a cross-sectional identification strategy. Here, we compare the level of satisfaction of winners and losers in 2001 and in 2009 separately, using ordinary least squares (OLS) regression.3 Next, we use the panel dataset to examine the dynamic relationship by regressing the change in satisfaction (from 2001 to 2009) on change in winner-loser status, also using OLS regression (standard errors are clustered at the 2001 municipal level in all regressions). The latter strategy allows for a stronger causal claim over the cross-sectional strategy: Being a winner or

3 In all regression analyses, we only include respondents with non-missing values on the dependent variable in both 2001 and 2009. Furthermore, certain respondents were omitted: One respondent lived in 2001 in a municipality that is not included in the survey but is adjacent to one that is; some respondents changed gender between 2001 and 2009, indicating either error on the part of the interviewer, or the same respondents were not interviewed in 2001 and 2009; and some respondents had moved to another municipality between 2001 and 2009.
a loser can be affected by many other factors, observable as well as unobservable, and the panel of re-interviewed respondents allows us to hold constant all individual characteristics that persist over time.

We identify winners and losers by matching (for the first survey) the party preference as measured in 2001 with the mayor elected for E98, and (for the second survey) the party preference as measured in 2009 with the mayor elected for E06. To estimate the effect of changing status from winning to losing and from losing to winning, we use the panel structure of the dataset. All respondents in the 2009 survey also completed the 2001 survey, and the panel data thus contains information on citizens’ evaluations of the input and output side of democracy at two points in time. This allows us to compute the individual-level change in evaluations and to estimate the effect of changing status on this.

However, three elections were held during the time span of this study: E98 for the period 1998-2001, E02 for 2002-2005, and E06 for 2006-2009. The fact that E02 was held between the two surveys must be taken into account in the panel analysis of the effect of experiencing a transition from status as loser to status as winner (and vice versa). In the E02 election, a respondent could have experienced such a transition for two reasons: (1) because of a shift in mayor from E98 to E02 or (2) because of a change in party preference from E98 to E02. Because we have no data on these potential transitions, we perform two robustness tests to see if the results are sensitive to them. In the first robustness test, we restrict the sample to respondents from municipalities where the mayoral party did not change from E98 to E02. Respondents in this sample cannot have experienced a transition due to a shift in mayor. In the second test, we restrict the sample to respondents with identical party preference in E98 and E06. Although we have no information on the party preference of the respondents in E02, respondents with identical party preferences in E98 and E06 are more likely than other respondents to have the same preference in E02. If analyses of this restricted sample yield similar results, the results are not likely to be affected by unmeasured changes in party preference in E02.

We also conducted an additional robustness test concerning potential bias from reverse causality, to try to better isolate the effects of winning and losing in elections from the effects of dissatisfaction with the incumbent. Specifically, the causal relationship is reversed if respondents factor in mayors’ previous performance when they form their preference. Say that a mayor performs well over an

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4 We measure party preference by the standard question of which party you would vote for if an election was held tomorrow (see the appendix).
election period and that this is reflected in the satisfaction of voters who have a preference for the mayoral party (i.e., the winners). They therefore continue to have a preference for the same party in the next elections and the mayor ends up being re-elected. In this way, the reverse causal relationship can arise where respondents with a more favorable view of their local government tend to be winners by voting for the mayor’s party. Such incumbency effects are well known in political science (Gelman and King 1990), and we examine the influence of this potential bias using information on whether the mayor elected after the 2005 municipal elections was newly elected or re-elected. To this end, we estimate models where our measure of incumbency status is interacted with winner-loser status as this allows us to estimate separate effects of winner-loser status for respondents who reside in municipalities where the mayor was newly elected or re-elected, respectively. If analyses yield similar results for municipalities where the mayor was newly elected, the results are not likely to be affected by incumbency effects.

The literature on winners and losers has focused mainly on satisfaction with democracy, but following Dahl (1989), Easton (1975), Linde and Ekman (2003) and Weatherford (1992), we argue (as do Martini and Quaranta 2018) that output considerations are equally important if we want to understand how winner-loser status affects support to democracy. We therefore expect to find a gap between winners and losers with both the political system in general and with the outputs of the democratic system. We measure the effects on citizens’ evaluations of the input and the output side of democracy using three independent variables. As a measure of the input side, we use the following standard question: ‘All in all, how satisfied are you with how the local democracy functions in your municipality?’ Answers are scaled from 0 to 100 (100 = very satisfied). As measures of the output side, we use two variables: First, we measure the satisfaction with local services. Respondents were asked: ‘The Danish municipalities are responsible for a variety of services [services omitted; see appendix]…. All in all, how satisfied are you with these services in your municipality?’ Responses on a scale from 0 (= very dissatisfied) to 10 (= very satisfied), rescaled from 0 to 100 (100 = very satisfied). As mentioned, we also measure satisfaction with the services produced by the

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5 The dataset contains four potential measures of the evaluation of the output side of the political system. Two questions measure satisfaction with output: Satisfaction with local services and satisfaction with local facilities. We report the results of the former, as ‘services’ are broader than ‘facilities’. We also considered two measures on local problems: How local problems are handled (a single question) and presence of local problems (a battery of questions). We report results for the former, as the evaluation of the mere presence of problems cannot necessarily be ascribed to politicians’ performance. In both cases, the alternative measures tend to yield similar, but typically weaker, results. Full results are available in the supplementary material.
municipalities to assess voters’ satisfaction with democracy. The advantage of this measure over the usual measure of economic performance is that it taps into features for which the elected elites are directly responsible. We thereby partially avoid the problem addressed in the performance literature that voters blame incumbents for economic outcomes for which they are not really responsible.6

Our third dependent variable measures voter perceptions of the political unit’s problem-solving capacity. Respondents were asked: ‘All in all, how satisfied are you with how your municipality has handled the problems confronting your municipality?’. Responses ranged from 0 (= very dissatisfied) to 10 (= very satisfied), rescaled from 0 to 100 (100 = very satisfied).

We control for the following individual-level characteristics (initial 2001-level in the panel analyses to avoid endogeneity): likelihood of voting, interest in municipal politics (Gerber et al. 2003), knowledge of municipal politics (Galston 2001) and party preference. This brings us to a final control variable included in the panel analyses. As noted, Danish local government experienced a large-scale local government amalgamation reform which involved municipal mergers. The first and second round of interviews were conducted before and after this reform. Mergers may in themselves affect voter satisfaction (e.g., as argued by Hansen 2013, 2015; Lassen and Serritzlew 2011). We therefore consider the impact of whether the respondent’s residential municipality is merged or not, and if merged whether it makes up a small part (‘daughter’) or a large part (‘mother’) of the new, merged municipality. The rationale is that respondents living in a smaller municipality might be more dissatisfied with democracy because they are now part of a larger political unit, and that this may cause a change in satisfaction from 2001 to 2009. See the appendix for exact wording and scales for each variable. Table 2 shows descriptive statistics for our variables and makes clear that we have meaningful variation in the dependent variables for our categories of winner-loser status.

Insert Table 2 about here

Does winning or losing affect satisfaction with democracy?
We first estimate two cross-sectional models, one for the 2001 survey and one for the 2009 survey. The results are reported in Table 3 (to save space, effects for covariates are not reported in the

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6 Anderson (1995) argues that voters are capable of assigning responsibility for economic outcomes even in the rather complex situation of coalition governance.
tables; see the supplementary material). In 2001, winners, i.e. voters with a preference for their mayor’s party, systematically view their local government more favorably, regardless of whether covariates are included. Being a winner is associated with higher satisfaction with local services and democracy in the municipality of 5-8 and 11-13 points, respectively. This is 8-13 and 18-20 percent higher than the average satisfaction of losers (i.e., voters who prefer another party than the mayor’s). Furthermore, winners view their municipality as being better at handling local problems (7-8 points, which corresponds to 12-14 percent). Furthermore, voters with an unknown preference do not systematically view their local government less or more favorably. In 2009, we find similar results for satisfaction with local democracy and handling of local problems, though the effects are somewhat smaller. For satisfaction with local services, however, the effects are much smaller and statistically insignificant. Overall, we find quite strong evidence that winning and losing are associated with satisfaction with both the input and the output side of democracy in the long term, three years after an election has taken place.

We now turn to analyses of the panel dataset. We first stress that the panel dataset suffers from the limitation that data for E02 is unavailable, and we address this limitation later in the analysis by performing two robustness tests that partially address the problem. The basic logic of the panel analyses is as follows: If there is a causal relationship between winner-loser status and satisfaction with democracy, satisfaction among voters who experience no change in winner-loser status (WW and LL) should not change, while satisfaction among voters who do change status (LW or WL) should change according to our expectations. The regression results, which are reported in Table 4, support our expectations: The effects reflect differences in the average change in satisfaction for winner-losers (WL), loser-winners (LW) and consistent winners (WW), compared to consistent losers (LL). Winners who turn into losers (WL) stand out by having effects that are larger, negative as expected, and statistically significant (at the 10-percent level in some cases) in all but one instance.
To better compare the changes in satisfaction for voters whose winner-loser status differs, Table 5 reports predicted mean changes in satisfaction for a typical voter (i.e. with the most frequently occurring values on the covariates) with an associated significance test of whether the mean change is statistically significantly different from zero. As we see, the average changes for consistent losers and winners (LL and WW) tend to be small and are all statistically insignificant, except in one instance (LL for how local problems are handled when covariates are not included). The average changes for voters with an unknown preference likewise tend to be small, with a few exceptions of which one instance is statistically significant (again for how local problems are handled). Turning to voters who experience a change in status, the average changes in satisfaction for loser-winners (LW) are small with varying sign, and always statistically insignificant. Therefore, there is no evidence that a change from loser to winner positively affects satisfaction. However, the results for winner-losers (WL) are in line with our expectation: The average change is negative and statistically significantly different from zero in all cases (only at the 10-percent level in one instance). This result is also consistent with the finding in the cross-sectional analyses in Table 3, which showed a difference in satisfaction between winners and losers.7

Finally, we present robustness tests based on the panel dataset. We account for the problem that one election (E02, the election period 2002-2006) took place between the two surveys. In this election, two events could have happened that might distort the results: A respondent could change status as winner or loser (1) because of a shift in mayor from E98 to E02 or (2) because of a change in party preference from E98 to E02. We perform two robustness tests, and the output is available in the supplementary material. In the first test, we restrict the sample to respondents in municipalities with no change in mayoral party from E98 to E02. We find very similar, and many slightly stronger, results in this subsample for winners who have turned into losers.8 We infer that the negative effect

7 Regarding handling of local problems, there appears to have been a general decline in satisfaction for all voters from 2001 to 2009. This is reflected in negative effects that are significant in two instances when covariates are not included (for consistent losers and voters with an unknown preference).
8 On a side-note, we again see indications of the general decline in satisfaction with handling of local problems, as noted in footnote 7.
on satisfaction of changing from winner to loser is not likely to be an artefact created by unobserved transitions in the election between the two surveys.

In the second test, we restrict the sample to respondents with the same party preference in 2001 and 2009. Again, we find very similar results, although the effects for winner-losers are statistically insignificant for two of the measures of satisfaction when covariates are included (with a P-value of 0.18, 0.14, 0.16 and 0.22 in no. 41, 42, 47 and 48, respectively). This is not surprising as the sample size is halved (to between 260 and 375 respondents) when the sample is restricted to respondents with the same party preference. Since the respondents in the restricted sample have stable preferences, we expect that they are more likely than other respondents to have the same preference in E02; and since the analyses of this restricted sample yield similar results, they are not likely to be affected by unmeasured changes in party preference in E02.

The third and final test concerns potential bias from reverse causality, which we examine using models where the measure of incumbency status is interacted with winner-loser status (the output is available in the supplementary material). As in the previous robustness tests, we find very similar results but, as expected, only for respondents with residence in municipalities where the mayor is newly elected. We infer that the negative effect on satisfaction of changing from winner to loser is also not likely to be an artefact of incumbency effects.

We conclude that the similar results in the cross-sectional analyses, the panel analyses, and in the robustness tests provide evidence that status as winning or losing affects satisfaction with the input and output side of democracy in the long term.

Discussion and Conclusion

In this paper, we examine the persistence of voter satisfaction with democracy over time, using Danish local government as our case. First, we find that the winner-loser gap has consistent effects on voters’ satisfaction with democracy, using measures on satisfaction with democracy and services as well as perceived problem-solving capacity. On all three dimensions, losers are more dissatisfied than winners, and this effect is remarkably persistent. As we are able to find substantial winner-loser effects using survey data on satisfaction with democracy three years after elections were held, we are confident that the effects are real and should be incorporated into our theories on the functioning of democracy.

Second, we find that changing status from winning to losing adversely affects satisfaction with democracy, while changing from losing to winning does not increase voter satisfaction. This suggests
that winning an election has a more ephemeral effect than losing. We suggest that a future line of research investigate why this is the case. Why is losing apparently stored in the voters’ memory and taints their perception of democracy? Why are the underlying psychological processes not symmetrical?

A plausible answer can be found in the psychological literature on the endowment effect: Winning is not likely to simply mirror losing. Turning into a winner (a candidate you support goes from opposition to government) is a gain: Something you want, but did not have before, becomes a reality. Turning into a loser (a candidate you support is pushed out of office) is, of course, a loss. According to the endowment effect (Thaler, 1980: 44), the pain of losing something is greater than the pleasure of gaining the same thing. In other words, people tend to have loss aversion (Kahneman & Tversky, 1984: 348). Soroka (2014) recently suggested that humans have deep evolutionary reasons for focusing on negative outcomes, because failure to comprehend them can have fatal consequences. In a similar vein Rozin and Royzman (2001) and Baumeister et al. (2001) argue that negative information is much more likely to catch the attention of voters compared to positive information, the reason being that negative information potentially has much more dramatic consequences for the individual compared to positive information. Given that psychologists agree that negative feedback from the environment has stronger effects on attitudes and behavior than positive feedback – and that this is a general psychological mechanism – it seems reasonable to suggest that the effect of losing on dissatisfaction with democracy and its performance is more persistent than the positive emotions associated with winning.

On a final note, our estimates of winning or losing on satisfaction with democracy are likely to be conservative as the Danish municipalities constitute a least likely case for finding effects of status as winning or losing. Despite these cultural and institutional features, our study supports that winning or losing in elections has substantial effects on the perception of democracy.
Appendix: operational definitions

All survey questions mentioned below have been translated from Danish to English. Standard residual categories on response scales (e.g., don’t know, not eligible to vote) are not mentioned below.

A. Measures of satisfaction with democracy

Satisfaction with local democracy: Respondents were asked: ‘All in all, how satisfied are you with how the local democracy functions in your municipality? Are you very satisfied, somewhat satisfied, not very satisfied or not at all satisfied?’. Scaled from 0 (not at all satisfied) to 100 (very satisfied).

Satisfaction with local services: Respondents were asked: ‘The Danish municipalities are responsible for a variety of services, including aid and care for the elderly; services and other aid to persons relying on social security benefits; child care; issuance of permits and licenses; granting subsidies for organizations and other activities; providing information on local services and policies. All in all, how satisfied are you with these services in your municipality? Indicate your opinion on a scale from 0 (Very dissatisfied) to 10 (Very satisfied)’. Scaled from 0 (very dissatisfied) to 100 (very satisfied).

Satisfaction with local facilities: Respondents were asked: ‘The municipalities also provide a variety of facilities, among others: facilities for sport, leisure and culture; parks and green areas and their maintenance; roads and road maintenance. All in all, how satisfied are you with these facilities in your municipality?’ Same response scale as for previous question. Scaled from 0 (very dissatisfied) to 100 (very satisfied).

How local problems are handled: Respondents were asked: ‘All in all, how satisfied are you with how your municipality has handled the problems confronting your municipality? Indicate your opinion on a scale from 0 (Very dissatisfied) to 10 (Very satisfied)’. Scaled from 0 (very dissatisfied) to 100 (very satisfied).

Presence of local problems: Respondents were asked 14 questions: ‘Now follow a number of conditions which concern many municipalities. For each condition, please state whether you think that the condition is a problem for your municipality. Please state your opinion on a scale from 1 to 5 where ‘1’ is ‘not a problem’ and ‘5’ is ‘a very serious problem’. Are there no or more significant problems in your municipality when it comes to securing ... a strong local economy; adequate employment for all; public safety and crime prevention; a good environment; good housing for all citizens; equal access to social and cultural activities; adequate education for all children; adequate help for persons in trouble; integration of ethnic and religious minorities; care for the elderly;
childcare; safe roads; adequate health provisions; dealing with narcotics and alcohol abuse’. Coded as an additive index scaled from 0 (A very serious problem) to 100 (Not a problem).

B. Party preference, winner-loser status, incumbency status and covariates

**Party preference:** Respondents were first asked about whether they would vote if elections were held tomorrow (see vote intention below), and if a respondent would definitely vote, quite likely vote or quite likely not vote, then the respondent was asked: ‘What party or list would you vote for?’/’In case you voted anyway, what party would you vote for?’ (list of parties and other categories not reported here). Preference in 2001 is linked to data on mayors elected after the 1997 Municipal Elections (provided by Professor Ulrik Kjær, University of Southern Denmark), and preference in 2009 to mayors elected after the 2005 Municipal Elections (data on mayoral parties from Local Government Denmark, 2005). Some respondents’ party preference is coded as unknown, either if a respondent has opted to not state their preference, or has stated a preference for one of the following parties (in Danish): Liberal Alliance, Kristelijk Folkeparti/Kristendemokraterne, Enhedslisten, Centrum Demokraterne, De Grønne, Demokratisk Fornyelse, Fremskridtspartiet, Andet landspolitisk parti (a residual category). These categories are coded as missing because of very few observations, because the party is not represented nationally in both elections, or because it is a residual category.

**Winner-loser status:** In 2001 and 2009, winner-loser status is coded as a binary indicator with correspondence between a respondent’s preferred party and the mayoral party coded as 1 (winner) and non-correspondence as 0 (loser). With respect to local parties: If a mayor is from a local list and a respondent prefers a local list, then this is defined as correspondence although there may be more than one local party in the municipal council. Change in winner-loser from 2001 to 2009 is coded as three binary indicators for loser-winners, winner-losers and winner-winners (with loser-losers as reference category), respectively. For respondents with unknown preference, see coding of party preference.

**Incumbency status:** Binary indicator of whether the mayor of the respondent’s residential municipality was newly elected or re-elected after the 2005 Municipal Elections: Newly elected (coded as 1) or re-elected (coded as 0). For merged municipalities: A newly elected mayor is a person who either (a) was not mayor in any of the merging municipalities prior to the merger; or (b) was not mayor in the respondent’s residential municipality but in one of the other municipalities in the
merger. A re-elected mayor is a person who was mayor in the respondent’s residential municipality prior to the merger. Data from Local Government Denmark (2006).

**Merged municipality**: Categorical variable of whether the respondent’s residential municipality is merged or not, and if merged whether it makes up a small part (‘daughter’) or a large part (‘mother’) of the new, merged municipality. 'Mother' municipalities are merged municipalities where the change in municipal population from 2001 to 2009 is below the median change; and 'daughters' are municipalities where the change is equal to or above the median change. Data on mergers from Executive Order 656/2005.

**Vote intention**: Respondents were asked: ‘Suppose municipal elections were held tomorrow. How likely is it that you would vote? Would you definitely vote, quite likely vote, quite likely not vote, or would you definitely not vote?’ . Coded as a binary indicator of whether the respondent would definitely vote (coded as 1) or if it less likely (coded as 0).

**Interest in municipal politics**: Respondents were asked about their interest in municipal politics: ‘People’s interest sometimes varies across different areas of politics. How interested are you personally in each of the following areas? … Local politics’ (not at all interested, not very interested, fairly interested or very interested) Coded as binary indicator of whether the respondent is very or fairly interested (coded as 1) or less interested (coded as 0).

**Knowledge of politics and services**: Respondents were asked six questions about politics and services (questions not reported here): Who is responsible for home care and nursing homes (correct answer is the municipalities). Who is responsible for determining the size of the state pension (correct answer is Parliament). Who is responsible for processing building permits (correct answer is the municipalities); Which party has the most mandates in the Municipal Council (varies); and the name and party of the mayor (varies). Coded as binary indicator based on an additive index with four to six correct answers coded as 1 and otherwise 0.
**Literature**


Local Government Denmark (2006). List of mayors published on website (dated 10 January 2006). URL: http://www.danskekommuner.dk/default.asp?id=49766 (no longer available; can be obtained from the authors).


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<td>LW</td>
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<tr>
<td>WL</td>
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Note: WW corresponds to winner at t1 and t2; LL to loser at t1 and t2; LW to loser at t1 and winner at t2; WL to winner at t1 and loser at t2.
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Note: Reported are means of levels and changes in satisfaction and frequencies for re-interviewed respondents.
### Table 3 Regression results for satisfaction and winner/loser status, 2001 and 2009

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Note: Reported are unstandardized coefficients with standard errors in parentheses (clustered at the 2001 municipal level). Estimates for covariates are not reported to conserve space.

*: Significant 10% level.
**: Significant 5% level.
***: Significant 1% level.
Table 4 Regression results for change in satisfaction and winner/loser status, 2001-2009

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Note: Reported are unstandardized coefficients with standard errors in parentheses (clustered at the 2001 municipal level). Estimates for covariates are not reported to conserve space.

*: Significant 10% level.
**: Significant 5% level.
***: Significant 1% level.
Table 5 Estimated mean changes in satisfaction by winner/loser status, 2001-2009

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Note: Reported are predicted mean changes in satisfaction by winner-loser status from the regression models in Table 4, in models with covariates for a voter who resides in a merged ‘mother’ municipality, who would definitely vote if local elections were held tomorrow, who is more interested in and knowledgeable of municipal politics and who would vote for the Liberal Party if municipal elections were held tomorrow. The null hypothesis of the significance tests is that the mean change is equal to zero.

*: Significant 10 % level.
**: Significant 5 % level.
***: Significant 1 % level.