

RESEARCH ARTICLE

The effect of accumulated losses on perceptions of legitimacy

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Abstract

How do citizens react to repeated losses in politics? This paper argues that experiencing accumulated losses creates strong incentives to externalize responsibility for these losses to the decision-making procedure, which can, in turn, erode legitimacy perceptions among the public. Using a survey experiment ($N = 2,146$) simulating accumulated losses in a series of direct votes among Irish citizens, we find that decision acceptance and the perceived legitimacy of the decision-making procedure diminish with every loss. Three accumulated losses depress the perceived legitimacy of the political system. These effects are mediated by procedural fairness perceptions, suggesting that even when democratic procedures are used, accumulated losses can induce a belief that the process and system are rigged.

Keywords: Procedural fairness; referendum; experiment; political trust; satisfaction with democracy; democratic innovation

Introduction

Coping with the experience of loss is inherent in politics, yet challenging to most people (Mercer, 2005; Pierce et al., 2016). At the same time, democracies' viability depends on their ability to secure the support of those on the losing side of a political decision (Anderson et al., 2005; Clayton et al., 2021). It is critical that losers recognize 'the legitimacy of a procedure that has produced an outcome deemed to be undesirable', as Nadeau and Blais (1993: 553) noted in their seminal work on losers' consent. Today democracies are experiencing multiple crises, accentuated by the erosion of basic democratic norms and electoral participation, and, the rise of political polarization and fake news (Vosoughi et al., 2018; Przeworski, 2019). In this context, the long-standing democratic challenge to keep political losers on board and to obtain their acceptance and compliance with decisions voluntarily becomes ever more difficult (Ward and Tavits, 2019; Spina, 2021).

The use of democratic procedures can alleviate the negative effects that come with the experience of loss through the reassurance that there will be a fair chance to win the next time around (Esaiasson, 2011; see also Mauk, 2020; Werner and Marien, 2020). But what if this next time does not offer the anticipated win? Extensive research has been carried out on citizens' reactions to winning or losing in politics once,¹ but we know surprisingly little about how the public reacts to the experience of accumulated political losses. In a similar vein, the conditions

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¹For reactions to one-time winning and losing, see for example, Anderson et al. (2005), Craig et al. (2006), Dahlberg and Linde (2017), Esaiasson 2011, Esaiasson et al. (2019), Plescia (2019) and Singh et al. (2012).

under which the use of democratic procedures could alleviate the negative effects associated with political loss remain vastly understudied.

There are indications in the context of the electoral competition that accumulated losses can be detrimental to perceptions of legitimacy (Anderson et al., 2005; Curini et al., 2012; Chang et al., 2014; Daniller and Mutz, 2019; Kern and Kölln, 2022), but it is largely unclear when and why this happens. The extant literature needs to be advanced in at least three important directions. First, when working with cross-sectional electoral data, causal inference is difficult, because election losers might differ from election winners apart from their electoral status and years pass by between elections with other developments, such as political scandals or crises, also taking place (Bowler and Karp, 2004; Chanley et al., 2000). Second, to our knowledge, studies investigating accumulated losses are limited in the number of incidences of loss studied. How people react to more than two losses in a row remains unclear. Finally, despite the increased popularity of the direct involvement of citizens in political decision-making (Qvortrup, 2017) and the oft-held belief that it can strengthen perceptions of legitimacy, the studies on accumulated losses are limited to the electoral setting.² This study is specifically designed to tackle these challenges.

This paper advances a theoretical argument on the effect of accumulated losses. As accumulated loss is exceptionally painful, we expect this experience to be distinct from losing just once or nonconsecutively. To cope psychologically with accumulated losses, individuals engage in post hoc rationalization, whereby they start doubting the fairness of the decision-making process that produces a series of unfavorable outcomes. We expect this to happen independently of its actual fairness. Once citizens start doubting the fairness of the process, their perceptions of the legitimacy of the system as a whole are affected negatively, putting losers' consent at risk.

We test this theoretical argument's main attitudinal predictions and assumptions with a design that is based on voting in referendums. This design presents important advantages. First, it enables stronger causal inference to address several methodological challenges in the available research on losing that heavily relies on cross-sectional election studies data (e.g., self-selection, endogeneity, reciprocal causation, spurious relationships). Second, it allows us to extend the research on losing in political decision-making beyond elections. Our analysis leverages data from an original preregistered survey experiment conducted in Ireland ($N = 2,146$) in January 2019 in the run-up to a real-world referendum to be held in May 2019. In the experiment, we manipulated the number of losses in direct votes by randomly assigning participants to winners or losers of three referendums.

We find that with every additional loss, the acceptance of a political decision and the perceived legitimacy of the political decision-making process diminishes. Three accumulated losses depress the perceived legitimacy of the political system as a whole. Also, the effect of losing on perceptions of legitimacy is potentially mediated by perceptions of procedural fairness. Beyond its implications for the theory and empirics on losers' consent, this study offers a blueprint for an experimental design that is able to capture the causal effects of the repetitive nature of winning and losing in politics and provides guidance for interpreting data on real-world elections and referendums.

Legitimacy perceptions and accumulated losses

Perceptions of legitimacy can be defined as 'a psychological property of an authority, institution, or social arrangement that leads those connected to it to believe that it is appropriate, proper, and

²The only other study to our knowledge is Morrell (1999), in which American college students discussed and voted on three issues over the course of four weeks. Interestingly, students' commitment to and satisfaction with the outcome was not affected by the favorability of the outcome. Given that the theoretical focus of this study was not accumulated losses, and losses were not randomly assigned nor were different groups of losers compared with each other (e.g., occasional to consecutive losers), the question of the causal effect of accumulated losses on perceived legitimacy remains unanswered in this study.

just' (Tyler, 2006: 375). In addition to their normative value, these perceptions allow political leaders and political systems to implement authoritative rules for the regulation of society (Van Ham et al., 2017). The lower level of perceptions of legitimacy among losers compared to winners is well documented in the electoral context (Anderson et al., 2005; Hansen et al., 2019). The evidence beyond the electoral context is scarcer. Empirical studies on the effect of participatory decision-making procedures on perceptions of legitimacy often rely on aggregate data or do not consider the effect of outcome favorability. However, a handful of recent studies have revealed substantial winner–loser gaps in perceptions of legitimacy following referendums and deliberative processes (Marien and Kern 2018; Arnesen et al., 2019; Esaiasson et al., 2019; Brummel 2020; Christensen et al., 2020). In line with these studies, we argue that also in the context of a referendum, perceptions of legitimacy of losers are lower than legitimacy perceptions of winners. This leads to our first hypothesis.

HYPOTHESIS 1. (One-time) Losing decreases individuals' legitimacy perceptions.

But what happens when losses accumulate? Empirical insights from electoral studies on accumulated losses show that those who lose twice are less satisfied with democratic performance than those who lose only one of the two elections under study (Curini et al., 2012; Chang et al., 2014; Hansen et al., 2019). The underlying mechanisms remain unclear.³ We argue that the effect of accumulated losses on perceived legitimacy is different from the effect of a single loss or several nonconsecutive losses. When citizens lose in an accumulated way (i.e., repeatedly and consecutively), something *more* is happening.

Losing in general results in strong affective and biological reactions. The intensity of these reactions may vary depending on the type of losing and the stakes involved, but the psychological underpinning of losing is the same: losing hurts. This has been shown in the context of sports (Wilson and Kerr, 1999) as well as in the context of elections (Pierce et al., 2016; Toshkov and Mazepus, 2023). Pierce and colleagues (2016), for instance, show that losing strongly affected the emotions of partisans after the 2012 USA. Presidential Election. Losing is detrimental to individuals' self-esteem and self-worth and can have physiological consequences such as changes in blood pressure, compromised decision-making, increased stress levels, and a reduced level of testosterone (Wilson and Kerr, 1999; Robertson, 2013). In retaliation, individuals not only try to navigate these strong and negative emotions, but they also try to regain their self-image. They seek cognitive consistency to cope with loss (see Festinger, 1957 on dissonance theory). While one-time loss can elicit these reactions, when people lose more than once, the feelings of frustration can have greater negative downstream effects on their perceptions of the fairness of the process. Losing once or twice in a row could just be bad luck, but when losses accumulate, the feelings of frustration may intensify and people may start losing faith that they have a fair chance of winning the next time. This is in line with Anderson and colleagues' (2005) argument, that accumulated losses lead to an erosion of legitimacy perceptions because of the greater frustration that arises among losers with every loss.

To cope with accumulated losses, citizens will have a stronger impetus to rationalize their repeated losses and put forward post hoc arguments that attribute responsibility for the losses to the external procedures that led to these losses. In doing so, individuals frame the loss to limit the damage caused to their own self-esteem and dignity. A similar argument has been made in the context of sporting competitions (Hastorf and Cantril, 1954), conspiratorial thinking (Miller et al.,

³There is also a theoretical expectation that structural exclusion from power diminishes perceptions of legitimacy among social and political minorities (Lijphart, 1999). While the results from this field can give some insights into the effects of accumulated losses, many additional factors are likely to affect perceptions of legitimacy among minority and disadvantaged groups beyond the repeated confrontation with political decisions that do not align with their interests (Pérez, 2015; Koch, 2019). In this study, we are not aiming to capture the experience or the effects of systematic exclusion from power, but rather to gain insights into the experience of accumulated losses in democratic decision-making and how this affects perceptions of legitimacy.

2021), and elections and electoral integrity (Daniller and Mutz, 2019). While one-time losers may already evaluate procedural characteristics more negatively (as compared to winners) (Craig et al., 2006; Esaiasson et al., 2019; Van der Eijk and Rose, 2021), we expect this effect to be much stronger when losses accumulate and the need to find face-saving explanations becomes much more pressing compared to experiencing a single or occasional loss. Hence, we argue that accumulated losses would enhance the negative effect of losing on individuals' legitimacy perceptions. This reasoning leads to the second hypothesis.

HYPOTHESIS 2. The effect of accumulated losses on legitimacy perceptions is greater than the effect of one-time or two-times losing.⁴

The context: losing in referendums

While most of the literature on which we built has focused on losing in elections, we study this argument in the context of losing in a (hypothetical) referendum. Notably, in referendums, the effect of losing legitimacy perceptions is more likely to depend on how one is affected by a decision than in elections. When the salience of the issue is high the effect of losing might be stronger as compared to the effect of losing in elections. The issue is likely to be addressed after the decision has been taken and is unlikely (with some exceptions, i.e., the issue of abortion in Ireland) to re-appear on the agenda soon. Hence the consequences of the decision may transcend the electoral cycle (for a similar argument see Van der Eijk and Rose, 2021), meaning that losers remain losers for an indefinite period. Electoral losers, however, get the chance to become winners in the following election. On the other hand, when losers in a referendum vote on an issue that is not very salient to them, losing in elections might have a stronger and/or longer-lasting impact. Despite these differences, we hypothesize that when losses accumulate (i.e., individuals lose repeatedly and consecutively), this experience spurs in both types of contexts frustration as well as doubts about a fair chance of winning the next time which in turn affects individuals' perceptions of the legitimacy of the political system more generally.

Research design

To examine the main attitudinal predictions and primary assumptions of our theory we employ an experimental design that is based on voting in referendums because it allows us to combine a strong test for causal inference with ecological validity. We designed and preregistered a between- and within-subject online survey experiment ($n = 2,146$) (Druckman et al., 2011).⁵ In the embedded vignette, respondents were invited to participate in hypothetical referendums on three different policy issues resulting in eight experimental conditions of winning-losing combinations (see Fig. 1; complete guide in online Appendix A).

There are several reasons why we expect to find similar effects of losing in both hypothetical and real-world referendums. First, although people do not lose anything in mock referendums,

⁴The hypotheses were worded differently in the pre-registration plan. The exact formulation of the hypotheses was as follows. H1: Legitimacy beliefs of winners are stronger than legitimacy beliefs of losers after direct democratic decision-making. H2: Legitimacy beliefs of occasional losers are stronger than legitimacy beliefs of repeated losers after several rounds of direct democratic decision-making. Furthermore, we preregistered five hypotheses (the rest being: Legitimacy beliefs of consecutive losers are stronger than legitimacy beliefs of discontinuous losers after several rounds of direct democratic decision-making; The gap between winners and losers is asymmetric, as losing hurts more than winning eases; and The effect of all types of losing is moderated by citizens' degree of news consumption, as the more aware they are of current political issues, the less credible they may find losing in the voting study). Developing and testing all five in the scope of one paper turned out to be unfeasible; therefore, in this paper, we decided to focus on the first two hypotheses and leave the remaining for the online Appendix E.

⁵Replication materials are available at: <https://doi.org/10.7910/DVN/N6SASN>.

An bhfuil tú toiliú leis an togra chun an Bunreacht a leasú atá sa Bhille thíosluaite?

Do you approve of the proposal to amend the Constitution contained in the undermentioned Bill?

Thirty-eighth Amendment of the Constitution (Divorce) Bill 2019

The result of this proposal would be a **reduction** in the waiting time for a divorce from four to two years.

Do you approve of reducing this waiting time?

Ná cuir marc ach **san aon ciorcal amháin**
Place a mark in **one circle only**

Má thoilíonn/ Approve

Mura dtoilíonn/ Not approve

Figure 1. Example referendum ballot paper used in the vignette.

they are reminded about real-world referendums, and this experimental design closely resembles the voting at real-world referendums in Ireland (see the subsequent section on the experimental design). Second, previous research shows that concern about the potentially different effects of hypothetical as opposed to real-world scenarios may be misplaced; people's reactions to hypothetical scenarios do not differ much from their reactions to real-world scenarios (see for example, Berinsky, 2009: 124; Tomz and Weeks, 2013). Third, we tested a possible emotional reaction to winning or losing after the three majority outcomes were announced and found that frustration accumulated with each loss, whereas enthusiasm increased with each win. The magnitude of frustration was larger than the magnitude of positive emotions, which is consistent with previous literature on losing emotions (e.g., Pierce et al., 2016).

The country case and the sample

The experiment was fielded in Ireland between January and February 2019. Respondents were recruited by Dynata using a quota-based sampling procedure to ensure demographic similarity of the sample to the Irish census. Respondents ranged in age from 18 to 81, with a mean age of 46.7. Fifty-two percent of respondents self-identified as female, and 58% reported having finished the third level of education (see also online Appendix B).⁶

Fielding this study in Ireland increases the ecological validity of the experiment. First, the Irish electorate is well-acquainted with referendums, which increases the credibility of the experimental protocol. Since 1947, as many as 40 referendums have been held in Ireland, and there has been a recent surge in important socio-political issues being decided by referendums (e.g., abortion law, marriage equality).⁷ Second, the policy issues we used for the experiment had already been

⁶Our sample is hence slightly older, slightly more female, and more educated than the Irish population. Most recent census data from 2016 revealed that the average age of the population was 37 years, that about 50% is female and that 42% of the population attained third level education (Central Statistics Office Ireland, 2017).

⁷According to Irish law, constitutional amendments must be decided by direct public voting. Although a referendum can also be convened for matters unrelated to amending the Irish constitution (so-called ordinary referendums), such a referendum has never been convened up to now. Besides, while salient issues have gained more prominence and exposure in the international media (for example the referendum on abortion), Ireland has also convened referendums on less controversial issues such as parliamentary inquiries and amendment of the bail restrictions (Henley et al., 2019; Elkin et al., 2020).

approved for future referendums. The experiment was fielded in the run-up to a referendum (to be held in May 2019) on the issue of changing the Irish constitution to reduce the waiting time for initiating divorce proceedings. The two other issues (lowering the voting age and removing the ‘women’s life within the home’ article from the constitution) were scheduled for the same referendum, although these were eventually postponed. The amendment to the constitution was aimed at liberalizing the divorce law in Ireland. 82% of the voters in the referendum approved the change to shorten the required minimum separation period before divorce proceedings can be initiated (Horgan-Jonse, 2019). A poll conducted in December 2017 revealed that only 16% of respondents approved of reducing the voting age from 18 to 16 in Ireland (<https://www.thejournal.ie/poll-lowering-voting-age-3737603-Dec2017/>). The proposal on women’s role in the household was to remove an article from the Irish constitution that referred to a woman’s place being in the home. The referendum was eventually postponed because of a lack of consensus on the exact type of amendment that should be made to the Constitution. The issues were policy matters that had been put forward for discussion by the Irish Citizens’ Assembly on Gender Equality. All three policy issues have high public importance and attract extensive media coverage. As they require constitutional amendments, they belong to the broader issue category of constitutional issues and institutional reforms, a category that has commonly occurred in the context of referendums in Western Europe in the past 30 years (Qvortrup, 2021).⁸

Experimental procedure

The experiment proceeded as follows. First, respondents were asked questions on sociodemographic variables, political trust, satisfaction with democracy, political ideology, and partisanship. Next, we explained the rules of the hypothetical referendum. Respondents were told they would be asked to cast a vote for three different policy proposals and each time they could either accept or reject the proposal. They were informed that several thousand citizens were participating in this referendum study and that they would find out after each vote they cast whether their vote choice was shared by the majority of the citizens taking part. After receiving their instructions, participants proceeded to make their three vote choices. Each time they read a short vignette with general information about the policy issue, cast a vote and received information on the outcome (see Table A.1, online Appendix A).⁹

In each referendum, the majority vote either agreed with or disagreed with the vote choice of the respondents. Hence, there were eight possible combinations of the winning–losing treatment: winning three times (WWW) ($n = 283$), winning–winning–losing (WWL) ($n = 254$), winning–losing–winning (WLW) ($n = 265$), winning–losing–losing (WLL) ($n = 271$), losing–winning–winning (LWW) ($n = 280$), losing–winning–losing (LWL) ($n = 249$), losing–losing–winning (LLW) ($n = 288$) or losing three times (LLL) ($n = 256$).¹⁰ Respondents were randomly assigned to

⁸It is possible that voters’ reaction to losing is influenced by their perception of the distribution of policy preferences on the respective issues in the electorate. To account for this possibility, we have rerun our main analyses among the subgroup of people for whom the majority preferences presented as part of the study clashed with the real majority preferences around the time of holding the survey for the issue on divorce and voting age (see online Appendix D.4) Unfortunately, we could not find polling data for the “women’s place in the home” issue for this time period. We find that the results remain robust and in fact almost exactly the same.

⁹This part was manipulated and, thus, fictional; the assignment of respondents to either the winner or loser groups in relation to the policy decision was completely random and independent of their vote choices. We debriefed the subjects about this at the end of the survey, informing them of the experimental design (see online Appendix A). This study was approved by the Social and Societal Ethics Committee of KU Leuven.

¹⁰Public opinion on each policy issue could influence citizens’ reactions toward winning or losing. If citizens were aware of public opinion on policy issues and the majority vote announced in our study disagreed with public opinion, the treatment may have confused respondents and, thus, confounded the effect. To potentially account for this, we collected qualitative feedback from respondents (responses to open-ended questions asking what they thought about the study) after having measured, post-treatment, the variables of interest. A systematic analysis of this qualitative data revealed that the study was perceived as credible, and no discernible pattern with regard to confusion was identified. Also, we explicitly mentioned in the debriefing that the outcomes of the vote were entirely fictitious, and not a reflection of Irish citizens’ actual thinking on these three topics.

one of these eight experimental conditions. The design did not allow us to randomize the order of the three policy issues; however, we measured the salience of every issue and ran robustness analyses to check the possible effect of issue salience (see online Appendix D.2). The vignette was designed to match the ballot paper commonly encountered in Irish referendums (see Fig. 1).

After the voting procedure, respondents were asked for their opinions and feelings about the results. This allowed us to measure to what degree respondents were (emotionally) affected by the wins and/or losses in the mock referendums, that is, how much they were roused by the treatment. This offers an indication of the ecological validity of the experimental setup and gives an insight into the underlying mechanisms. Next, the outcome variables were measured. Further, we embedded a manipulation check into the survey to test how well the treatment of ‘losing’ was taken (Kane and Barabas, 2019), and respondents were asked to indicate how many of the majority votes were consistent with their own preferences with regard to the policy issues.¹¹ Finally, respondents were debriefed about the objectives of the study, and we emphasized again that the votes and results were fictitious.

Ireland has held different referendums on the same day but we should note that in other contexts there might be more time between wins and losses compared to this experiment, which might lower the effect.

Measures

We measure four commonly used proxies of perceptions of legitimacy that tap into the perceived legitimacy of the decision, the decision-making process, and the political system (e.g., Esaiasson et al., 2019). The first proxy, *decision acceptance*, is directly related to the decision at hand and reads: ‘How willing are you to accept and comply with this decision?’ 1 = ‘not willing at all’ to 7 = ‘very willing’. The question was asked each time respondents cast their vote and learned about the (fictitious) majority outcome because decision acceptance is contingent upon the policy decision. The second perceived legitimacy proxy taps into the *perceived legitimacy of the decision-making procedure* (satisfaction with the use of referendums for arriving at a decision; 1 = ‘not satisfied at all’ to 7 = ‘very satisfied’) ($M = 5.26$; $SD = 1.52$) and was asked after the respondent knew the outcome of the three votes. The third and fourth proxies tap into more general opinions of the political system. At the start of the survey, we measured satisfaction with the functioning of democracy in Ireland (SWD, 0 = ‘extremely dissatisfied’, 10 = ‘extremely satisfied’; $M = 5.02$; $SD = 2.64$) and political trust.¹² To measure political trust we use a rescaled sum index measure that is based on four items, namely trust in Dáil Éireann (i.e., the Irish House of Representatives), trust in the government, trust in politicians, and trust in political parties. These four items form a strong one-dimensional scale ($\alpha = 0.95$) and the index variable ranges from 0 to 40 ($M = 16$; $SD = 9.4$). After the outcomes of the three votes were announced, we measured satisfaction with democracy ($M = 5.50$; $SD = 2.64$) and political trust ($M = 16.01$; $SD = 9.82$) again.¹³ These latter two proxies relate to the perceived legitimacy of the *political system* and are not directly connected

¹¹For the purposes of robustness, we ran a complier average causal effect (CACE) analysis (see online Appendix D.1), taking compliance with the treatment as an endogenous variable and assignment to the treatment as an instrumental variable. The results remain robust and strong.

¹²The debate on the true meaning of the concept *satisfaction with democracy* is still ongoing (see Canache et al., 2001; Linde and Ekman, 2003); nevertheless, the concept is widely considered to be an important evaluative attitude toward the functioning of political systems and it is a dominant measure in electoral studies of the winner–loser gap. Together with political trust, these two indicators will give a good indication of whether winning or losing can affect attitudes toward the political system.

¹³We measured decision acceptance after each vote. To avoid revealing the purpose of the experiment or overburdening the respondents with legitimacy questions, the other proxies were not assessed after each vote. Perceptions of legitimacy regarding the decision-making procedure were assessed after the outcomes of all three votes were announced. Satisfaction with democracy and political trust were assessed pre- and post-treatment.

with the specific decisions or decision-making procedure and, thereby, are the least likely to be affected by winning or losing. Figure 2 summarizes the measurement of the different proxies for perceptions of legitimacy.

Bivariate Pearson correlational analyses show that these outcome variables relate to each other positively and significantly. The strongest association is observed between (post-treatment) political trust and (post-treatment) satisfaction with democracy ($r=0.74$), followed by a relationship between the perceived legitimacy of the decision-making procedure and satisfaction with democracy ($r=0.34$). The weakest relationship is observed between third-time decision acceptance and (post-treatment) political trust ($r=0.11$) (see online Appendix C). This shows that the legitimacy indicators are related and are not in opposition to each other. They capture the same construct, although from different angles. Rather than losing variation, by creating an index, we will examine the effect of losing on each of these proxies separately.

To tap into perceptions of procedural fairness, we relied on respondents scoring the item ‘The process was fair’ on a seven-point scale (1 = ‘completely disagree’ to 7 = ‘completely agree’; $M=5.47$; $SD=1.30$). Post-treatment respondents were also inquired about their experienced feelings in the form of a battery of emotions. Four of the listed emotions capture frustration (anger, outrage, frustration and alarm; $\alpha=0.90$). We created a sum index scale and rescaled it to 0–1.

Identification and empirical strategy

We estimate the effect of losing on perceptions of legitimacy using difference-in-means t-tests and simple linear regression analyses. We start by examining the perceptions of legitimacy of *first-time losers* and *first-time winners* (HYPOTHESIS 1).

Subsequently, we investigate whether the number of losses affects four different indicators of legitimacy perceptions (HYPOTHESIS 2). We do so in different steps. In the first step, we compare the decision acceptance of those groups who received an unfavorable outcome in the third and last round of voting. In doing so, we can take the number of previous losses into account. In the second step, we repeat this analysis for the perceived legitimacy of the decision-making procedure, which was measured after the three decision outcomes were known. In the third step, we turn to the indicators that capture the legitimacy of the political system as a whole (i.e., satisfaction with democracy and political trust). We expect that citizens who lose three times in a row are not only less inclined to accept the decision itself and more inclined to start questioning the legitimacy of the decision-making procedure, but they will also start doubting the legitimacy of the political system more generally. To test this, we plot regression coefficients (together with their 95% CIs) from linear regression analyses estimating the effect of the number of losses on changes in satisfaction with democracy and on changes in political trust. For ease of interpretation, we combine this analysis of the experimental conditions into four different groups: losing once (WWL, WLW, LWW); losing twice (WLL, LLW, LWL); and losing three times (LLL) and compare them to those who never lost (WWW, reference category). We furthermore also examine whether accumulated losses elicit increased feelings of frustration in individuals. To do so, we employ post-treatment measures on respondents’ experienced feelings of frustration (anger, outrage, frustration, and alarm; $\alpha=0.90$).

Results

To test HYPOTHESIS 1 we conduct difference-in-means t-tests. These tests show that the decision acceptance of first-time losers is significantly lower than the decision acceptance of first-time winners (both groups $n=1,073$). Losers score 1.79 points lower on a 1–7 point scale for decision acceptance compared to winners (95% CI: [1.66 to 1.92]) (equivalent to more than 1SD in standardized effect), confirming previous studies and providing support for the first hypothesis.

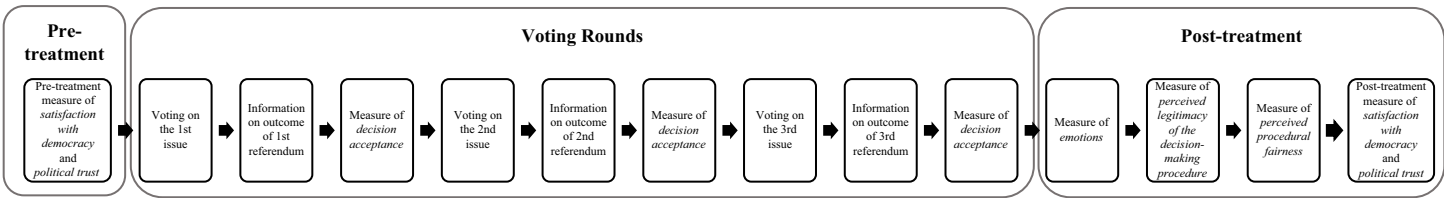


Figure 2. Flow of the survey.

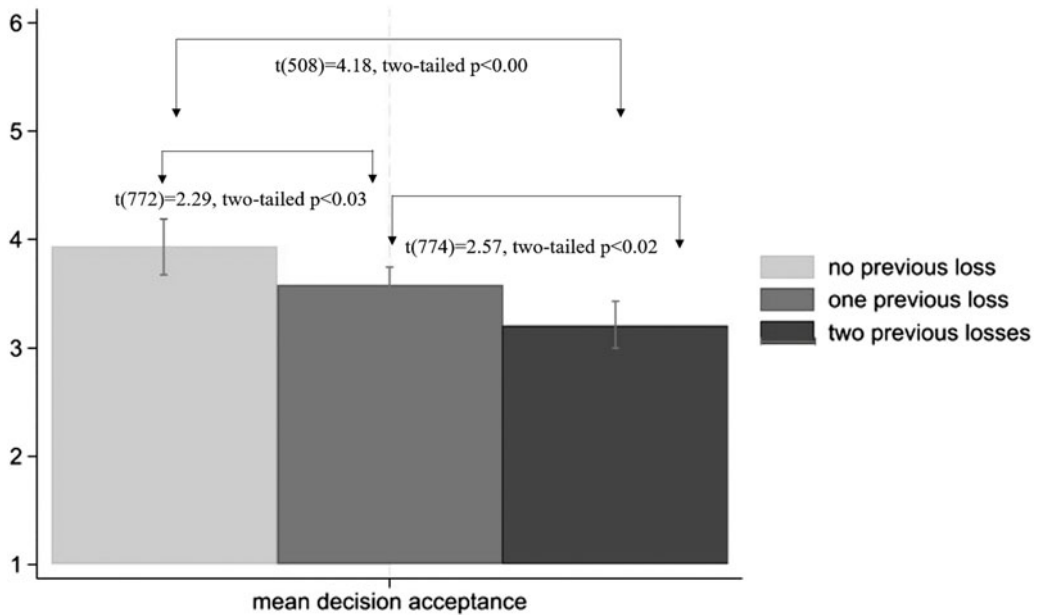


Figure 3. Decision acceptance of a loss taking previous losses into account.
 Note: Only respondents who have lost in the third vote are depicted. Nonstandardized mean decision acceptance with 95% CIs.

Does this winner–loser gap increase when losses accumulate? To answer this question, we proceed to investigate the effect of the number of losses on different perceptions of legitimacy (HYPOTHESIS 2). Figure 3 presents a comparison between the mean decision acceptance with 95% CIs of the three groups that experienced different numbers of losses (i.e., no previous loss, one previous loss, two previous losses; difference-in-means t-tests). We find that the number of previous losses exerts a negative, and substantively and statistically significant effect on an individual’s decision acceptance, with the effect of the accumulation of losses being twice as big as that of a single loss (i.e., no previous loss vs. two previous losses).

Figure 4 shows the perceived legitimacy of the decision-making procedure according to the number of losses participants experienced. It clearly shows that with each additional loss, satisfaction with the decision-making procedure diminishes. Similar to decision acceptance, the drop is steady and accumulates with each loss.

We turn to the effect of losing the legitimacy perceptions of the political system more generally. Figure 5 presents the regression coefficients (together with their 95% CIs) from linear regression analyses estimating the effect of the number of losses on change in satisfaction with democracy (Fig. 5, Model 1) and on change in political trust (Fig. 5, Model 2). We combine the experimental conditions based on how many times participants lost and differentiate between those who lost once (WWL, WLW, LWW); those who lost twice (WLL, LLW, LWL); and those who lost three times (LLL) (no loss represents the reference category). As Fig. 5 shows, losing three times in a row ($M_{swd} = 0.21, SD_{swd} = 1.44; M_{poltrust} = -0.41, SD_{poltrust} = 3.27$) has a significant negative effect on the change in satisfaction with democracy by $\beta = -0.26$ (CI: $[-0.5$ to $-0.02]$), and the change in political trust by $\beta = -0.70$ (CI: $[-1.24$ to $-0.15]$). There is, however, no significant difference between those who did not lose any of the three votes ($M_{swd} = 0.47, SD_{swd} = 1.36; M_{poltrust} = 0.26; SD_{poltrust} = 3.15$), those who lost once ($M_{swd} = 0.61, SD_{swd} = 1.55; M_{poltrust} = 0.13, SD_{poltrust} = 3.54$) and those who lost twice ($M_{swd} = 0.42, SD_{swd} = 1.41; M_{poltrust} = -0.06,$

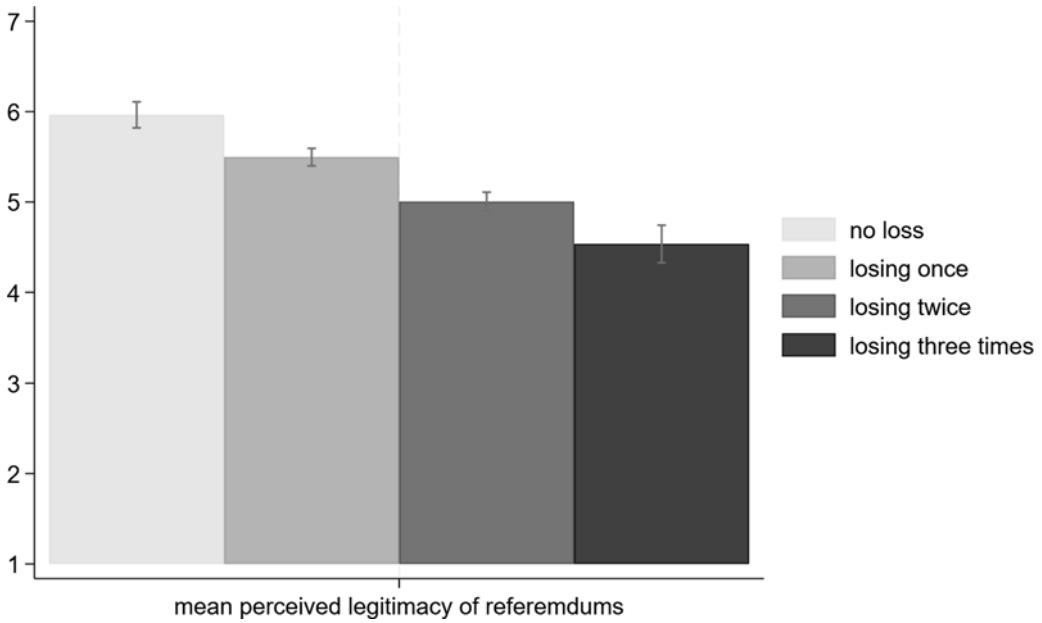


Figure 4. Perceived legitimacy of the decision-making procedure taking number of losses into account.
 Note: All respondents are depicted by the number of losses. Nonstandardized mean decision acceptance with 95% CIs.

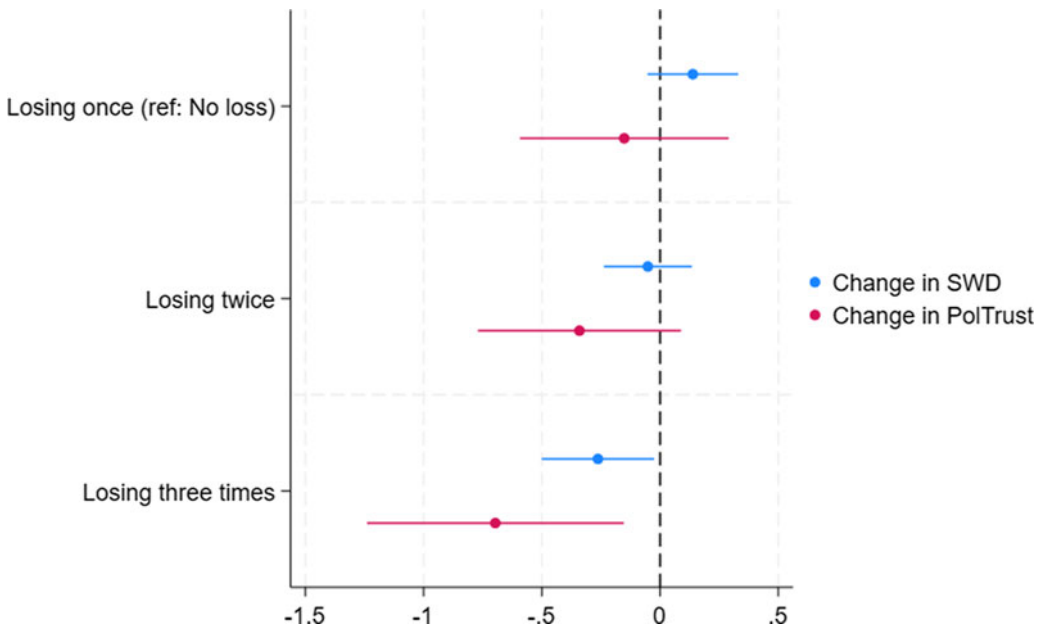


Figure 5. The effect of accumulated losses on perceived legitimacy of the political system.
 Note: SWD: satisfaction with democracy; PoITrust: political trust.

Table 1. Frustration associated with losing

	Mean	SD	Min	Max	N
<i>no loss</i>	0.08	0.18	0	1	276
<i>losing once</i>	0.14	0.21	0	1	772
<i>losing twice</i>	0.25	0.25	0	1	781
<i>losing three times</i>	0.32	0.24	0	1	245

Table 2. Perceived fairness of the decision-making process taking the number of losses into account

	Mean	SD	Min	Max	N
<i>no loss</i>	5.82	1.25	1	7	283
<i>losing once</i>	5.62	1.23	1	7	799
<i>losing twice</i>	5.31	1.32	1	7	808
<i>losing three times</i>	5.09	1.30	1	7	256

$SD_{\text{poltrust}} = 3.24$).¹⁴ In other words, it is only with the third loss that the legitimacy of the system as a whole starts to crumble. One explanation for this finding is that possibly it really takes three losses in a row in order to weaken legitimacy perceptions, another explanation however might lie in the fact that this is the only group that lost exclusively. In contrast, the group that lost twice did experience one win, which might reinforce their belief that they have a fair chance to win the next time.

Causal mechanisms (exploratory analyses)

Our design does not allow us to study the causal mechanisms. Yet, we proceed to present descriptive and indirect evidence for the association between frustration, procedural fairness perceptions, and legitimacy perceptions. Table 1 presents the mean frustration associated with different amounts of losses: Losing three times increases frustration four-fold. The results of difference-in-means t-tests show that these changes are statistically significant at a two-tailed $P < 0.00$ level. In other words, accumulated losses elicit much stronger negative feelings in individuals than occasional losses.

But why do accumulated losses diminish legitimacy perceptions and how does the frustration connect to legitimacy perceptions? In an exploratory analysis that was not preregistered, we attempted to answer this question in two steps. First, we present the average perceived fairness of the four groups of participants that experienced different amounts of losses (i.e., no loss, losing once, losing twice, losing three times) (Table 2). Public perceptions of the fairness of the process change for the worse with every additional loss. People question the fairness of the process after the first loss, and after each loss, the negative effect accumulates.

Second, we examine whether frustration is related to perceptions about the fairness of the process. Table 3 reports the result of simple OLS regression analyses in which we regress the levels of frustration on fairness perceptions (Model 1) and subsequently, the number of losses on four different proxies for legitimacy perceptions while controlling for fairness perceptions (Models 2–5).

¹⁴Another important observation here is that post-treatment, within-subject change in satisfaction with democracy is positive, although this change is a lot less among (repeated) losers. One possible interpretation for this finding is that participation in decision-making per se increases people's satisfaction with democracy overall as it might remind them of the opportunities in Ireland to participate in referendums. However, our design does not allow us to test this conjecture empirically, because we do not manipulate citizens' involvement in the referendum.

Table 3. Predicting fairness perceptions and (changes in) legitimacy

	(1)	(2)	(3)	(4)	(5)
	Fairness perceptions	Decision acceptance	Perceived legitimacy of the decision-making procedure	Satisfaction with democracy	Political trust
Frustration	-0.10*** (0.00)				
Amount of losing		-0.99*** (0.05)	-0.32*** (0.03)	-0.07 (0.04)	-0.19* (0.08)
Fairness perceptions		0.31*** (0.03)	0.63*** (0.02)	0.17*** (0.02)	0.10 (0.06)
First decision acceptance		0.02 (0.02)			
Second decision acceptance		-0.029 (0.02)			
Constant	6.19*** (0.06)	5.78*** (0.28)	2.59*** (0.15)	-0.27 (0.18)	-0.03 (0.41)
<i>N</i>	2074	2146	2146	2146	2146
<i>R</i> ²	0.09	0.23	0.36	0.03	0.01
adj. <i>R</i> ²	0.092	0.224	0.354	0.024	0.00

Note: Entries are coefficients estimated with OLS regression models. Standard errors are in parentheses. * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$.

In Model 2 we take the third decision acceptance as an outcome variable, controlling for the first and second decision acceptance. As the first column shows, frustration and fairness perceptions are negatively associated. The more frustrated the individuals are, the lower their beliefs about the fairness of the process. Procedural fairness perceptions and legitimacy perceptions, on the other hand, are positively associated.

These exploratory findings should be replicated with different experimental designs, e.g., ‘parallel designs’, suggested by Imai and Yamamoto (2013). Future designs could also incorporate the measures capturing other theoretically important pathways, such as differences in utility and cognitive consistency. Research disentangling these pathways holds important implications for shedding light on the scope conditions for the research on losers’ consent.

Robustness checks

We conducted additional analyses to evaluate the robustness of our findings and present further insights into individuals’ reactions to a series of (un)favorable political decisions. The main results stay robust. See the online Appendix D for minor exceptions.

Discussion and conclusion

Democracies struggle to keep people on board who disagree with political decisions. The temporary nature of the loser status features central in the seminal works on losers’ consent (Anderson et al., 2005; Przeworski, 2015). Yet, to date, the consequences of accumulated losses remain vastly undertheorized and unexplored. For example, Citrin and Stoker (2018: 59) wrote: ‘The hypothesis is that when the government treats people with respect and gives them a fair hearing, citizens are willing to accept painful outcomes and still retain faith in institutions. [...] Whether this positive effect of procedural justice would endure if individuals found themselves consistently on the losing side of official decisions or policy outcomes is unclear.’ This study provides evidence to fill the identified gap.

We theorized that to cope with accumulated losses, individuals have a strong urge to externalize responsibility for these. As a result, they will start doubting the fairness of the decision-making process, which then undermines perceptions of legitimacy. The experimental results

provide evidence that losing erodes perceptions of legitimacy and that this effect may be mediated by perceptions of procedural fairness. In contrast to our argument, the between-respondent comparison also shows that individuals' perceptions of the fairness of the process are already lower after the first loss and decline steadily with each additional loss. Moreover, the effect of losing three times is not exponentially larger than losing once or twice. This suggests that the painful experience of losing creates a need to externalize responsibility, even when a single loss is experienced.

Simultaneously, the results reveal that although unaffected by one or two losses, after three losses in a row, individuals' support for the political system starts to crumble. Moreover, a win in between two losses is less harmful than two losses in a row. This is very much in line with Easton's reasoning (1975: 446), which states that diffuse support should not be affected by specific political decisions but could be affected by accumulated experience. As such, accumulated losses have fundamentally different consequences compared with occasional losses. This study offers empirical evidence that, quite rightly, the temporary and transformable status of a loser is a critical element in the definitions of democracy (Przeworski, 2015). Likewise, in nonpolitical contexts, we can also observe similar reasoning. To comfort someone dealing with one or two losses, several proverbs point to its temporary nature: 'lightning doesn't strike twice,' the 'third time's the charm' or 'third time lucky'.

This study does not come without limitations. We take a first step in theorizing and testing the general effect of accumulated losses on perceptions of legitimacy, and we draw on the context of referendums because of their methodological advantages. However, the order of the referendum issues was not randomized. Future studies could randomize the order of the issues to ensure that the content of a specific issue does not affect respondents' reactions. Also, it remains to be studied whether similar patterns appear in different contexts of political decision-making. Even with regard to referendums, there are many more variations worth exploring (e.g., bottom-up/top-down process, level of politicization, technicality and salience of issue, margin of loss, etc.). As far as a highly salient issue such as Brexit is concerned, one loss might already have diminished perceptions of legitimacy for some people (Van der Eijk and Rose, 2021). This study did not include such an extremely salient issue. The study also lacks the statistical power to investigate the heterogeneity of the effects. Future studies could look into how factors such as issue salience, process characteristics, party identities or personality traits affect individuals' reactions to accumulated losses (see e.g., Arnesen et al., 2019; Clayton et al., 2021).

Furthermore, as there are no observational data available to test the causal argument we developed adequately, conducting an experiment appeared a suitable alternative because it enabled the randomization of the losing/winning effect from nonrandom political characteristics, and also the study of within- and between-subject effects. We aimed to maximize ecological validity, and we observed clear engagement with the treatment by participants; nevertheless, the setting remains hypothetical, respondents do not really win or lose anything and the wins and losses occur consecutively in a short period of time. As no real decision is being made, it might be possible that our study underestimates the effect of winning and losing in real life. On the other hand, however, in this study, wins and losses followed quickly after each other and it is possible that the effects of winning and losing are weaker or fade away entirely when wins/losses are further apart.

Finally, this study is limited to a single-country context. The Irish context allowed us to increase the experiment's realism, but in order to draw conclusions on the generalizability of our findings, replications in other contexts are needed. That being said, we speculate that citizens might have similar experiences in countries in which elections on different levels are held on the same day, such as Belgium (Bol et al., 2018) or Britain (Heath et al., 1999) or when elections are combined with direct democratic decision-making procedures on the same day, as it can occur in certain Swiss cantons (Freitag and Stadelmann-Steffen, 2010) and in some states in the USA.

Apart from replicating this study in different contexts, future research could also investigate whether a similar mechanism affects legitimacy perceptions of ethnic minorities and/or other structurally excluded groups.

Beyond its contribution to our understanding of the effects of accumulated losses, this study contributes to the broader debates about political decision-making, psychological reactions to losing, and citizen involvement in politics. These findings carry implications for our understanding of how voters perceive and react to the democratic decision-making process. In effect, in the past years, concerns about ‘sore losers’ and the prospects of democratic procedures to gather consent among political losers heightened considerably following former president Trump’s discourse (I will accept election results ‘if I win’) and the January 6 insurrection. There is a clear narrative among scholars and pundits that interprets the winner–loser gap in perceptions of legitimacy in terms of ‘sore losers.’¹⁵ Emerging empirical evidence problematizes optimistic ideas on the potential of democratic (participatory) procedures to mitigate the negative effect of losing (e.g., Essaiasson et al., 2019; Christensen et al., 2020). At the same time, procedures that are more participatory can increase both winners’ and losers’ perceptions of legitimacy and decrease the democratic satisfaction gap between electoral winners and losers (Werner and Marien, 2020; Leemann and Stadelmann-Steffen, 2021). Recent longitudinal studies also reveal that an increase in winners’ perceptions of legitimacy plays a much bigger role in the creation of winner–loser gaps than is often assumed, questioning this ‘sore loser’ narrative (Van der Meer and Steenvoorden, 2018; Daniller and Mutz, 2019; but see Brummel, 2020).

Our study adds to this ongoing debate. Based on the findings of this study, we argue that when participatory processes such as referendums are used in political decision-making, it is beneficial to use them occasionally so losers have the opportunity to become winners. At the same time, our findings suggest that referendums, or other democratic decision-making processes that deliver unfavorable outcomes, consecutively start losing their potential to mitigate the negative effects of losing and become part of the perceived problem. As Guinier argues (1995: 1): ‘Yet, sometimes, even when rules are perfectly fair in form, they serve in practice to exclude particular groups from meaningful participation. When they do not encourage everyone to play, or when, over the long haul, they do not make the losers feel as good about the outcome as the winners, they can seem as unfair.’ The narrative on sore losers rarely questions the fairness of the outcomes for different groups in society or the structural inequalities present in contemporary societies. Of course, we cannot exclude the possibility that people experience accumulated losses. Hence, it is critical to understand that a fair process might not be sufficient to console individuals if they lose repeatedly. These findings urge us to think more about how to minimize accumulated losses and/or look for ways that will enable people to cope with accumulated losses other than a loss of faith in the fairness and legitimacy of the system, for example by strengthening election monitoring and/or by media reporting on how electoral integrity is ensured.

We expect that questions surrounding losers’ consent will become increasingly important in the current context of strong affective polarization, decreasing duty-based citizenship norms and concerns about procedural fairness and democratic legitimacy (Van Ham et al., 2017; Westwood et al., 2018). This study offered a first step toward a better understanding of how individuals react to accumulated losses and the conditions of losers’ consent.

Supplementary material. To view supplementary material for this article, please visit <https://doi.org/10.1017/S175577392300036X>.

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¹⁵See for example <https://www.economist.com/graphic-detail/2021/03/18/the-gloomy-politics-of-sore-losers>.

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