

The socializing nature of protest events. Consequences of the 15-M protests on participants' political engagement over time.

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Abstract

In spite of the widespread belief that firsthand experience with protest is able to change participants' hearts and minds, the empirical evidence tracking actual changes after participation in protest events is scant and mixed. We examine whether participation in significant protest events increases political engagement in terms of both attitudes (interest, internal efficacy) and behaviors (later participation in demonstrations, overall political participation), and whether these effects persist over time. We use a unique panel survey that covers nine years (2010–2019) and tracks individuals before and after the major protests that took place in Spain in 2011, known as the Indignados or 15-M protests. Our results indicate that participating in the 15-M protests had a positive effect on all the studied political engagement indicators immediately after the protests and, in particular, about two years after they occurred. However, eight years after the protest events, most of these effects had faded.

Keywords: protest, participation, socialization, engagement, 15-M, Spain, indignados

Introduction

Political protests purportedly have a wide array of potential consequences, including changes in political rules, effects on agenda-setting and public opinion, and effects on the behavior and future lives of activists (Rucht, 2017). Over the last decade, we have witnessed the emergence of myriad protest events—Occupy, #MeToo, #FridaysforFuture, Black Lives Matter, marriage equality campaigns, etc.—aimed at producing some or all these effects. However, their effects on participants are largely unknown.

While the political and institutional effects of protest have garnered a great deal of academic attention (Amenta et al., 2010), much less is known about the potential socializing effects of protest on participants. This paper is concerned with the effects of protest participation on activists' dispositions, attitudes, and behaviors. Does taking part in a major protest event really leave a mark on participants? Specifically, do protests change participants' attitudes and behaviors in terms of their political engagement? The literature appears to suggest that this is the case (Vestergren et al., 2017). However, little empirical evidence has been produced that is able to isolate the socialization effects of participating in protests, given the methodological challenge created by three issues: finding an adequate control group (individuals that are 'untreated' by a protest event), dealing with potential selection bias (participants have different attitudes and behaviors from non-participants), and tracking both participants and non-participants over time.

Overcoming these methodological issues, we take the case of the Spanish Indignados protests, also known as the 15-M because of the date the movement officially began (May 15, 2011). The Indignados protest has been deemed one of the sparks that ignited a protest wave that lasted at least two years (Manski, 2018). Like Occupy Wall Street, the Indignados protests erupted after the financial crisis struck and austerity policies were implemented, and (similarly to those in Iceland and Greece) they went beyond claims to mere recovery of welfare state rights, incorporating claims for more rights and a better, more horizontal democracy (Della Porta, 2017). The 15-M was a wave of protests that was unlike anything that had occurred previously (Anduiza, Martín & Mateos, 2014), and it was followed by a dizzying succession of events, including a profound change in the party system. Its inaugural character has garnered a great deal of academic attention (Hughes, 2011; Tormey & Feenstra, 2015, Rodriguez-Teruel et al., 2019); still, we do not know whether participating in collective action actually changed the political attitudes and behaviors of activists, and for how long. Today, more than ten years have passed since the 15-M wave of protests, which

is enough time to assess the short-, medium-, and long-term effects that they had on the participants as well as to examine whether the 15-M fostered greater engagement among its participants beyond its initial events.

To study the short-, medium-, and long-term effects that this protest event had on those who participated in it, we use longitudinal data from the POLAT panel survey (Hernández et al., 2021). This survey follows a sample of Spaniards from November 2010 to May 2019. A series of differences-in-differences analyses indicates that the 15-M did indeed leave a modest mark on the indignados who took to the streets when it began; however, most effects tended to fade away as time passes, and almost no trace of the socializing effects of the 15-M remained nine years later. Our analyses constitute a stringent test of the theoretical suppositions about the socializing effects of protest using a highly-relevant case. These modest effects can be understood with the consideration that participants in these kinds of protests already showed relatively high levels of political engagement before taking part in them. We also put the effects of social movements' protests in perspective: they are limited, restricted to some attitudes, and not permanent.

This article is structured as follows. The first and second sections present how the literature has examined the biographical and socialization effects of social protests and social movements over time, as well as our expectations. The third section describes the specific Spanish context in which the 15-M took place, including the data source and the analytical strategy we employ. In the fourth section, we present our empirical results, and in the final section, we discuss our findings and acknowledge the limitations of the present study.

The socializing effects of participation in protest events and the limitations of previous research

The study of the individual-level effects of protest participation on an individual's attitudes and behaviors necessitates activism being considered as a potential socialization agency (Fillieule, 2012). Political socialization is understood as the process through which individuals internalize social norms and behaviors. Seminal studies in the field mostly focused on childhood, family, and school as the key elements of this phenomenon (Grusec & Hastings, 2015), while other approaches consider citizens responsible for their own socialization, which Jensen (2015, p. 91) calls "individualization": people construct their own life courses, meaning that socialization is something performed by the individual rather than imposed by outside social or institutional

forces. In addition, modern approaches tend to consider socialization as a lifelong and dynamic process, in which relevant experiences can potentially change attitudes at any age (Kuczynski et al., 2015). Of these experiences, political events—such as critical elections, political scandals, or economic shocks—tend to play a major role (Neundorf & Smets, 2017). Nevertheless, this perspective has not examined protest events as a type of political event that can leave a mark on individuals' socialization processes.

Protest events can be defined as “politically motivated, unconventional actions” (Kriesi et al., 1995, p. 263) or, more specifically, as “a collective, public action [...] organized by non-state instigators with the explicit purpose of critique or dissent together with societal and/or political demands” (Fillieule & Jiménez, 2003, p.273). Protest events can be consequential for political socialization; in fact, some research indicates that merely being exposed to the information-rich context of and the emotions surrounding a protest event (such as International Women’s Day in Spain) can boost political interest, spark conversations on the topic, and contribute to people forming opinions (Jiménez-Sánchez, Fraile, & Lobera, 2022). Like other significant political events, protests may affect the attitudes and behaviors of the people who witness them. However, in this case, we are interested in protest participation as an individual socializing experience—not as part of the political context, but as a participatory experience of its own. To this end, it is generally concluded that joining protests serves as a gateway to later involvement (Minkoff, 1997; Andersen & Jennings, 2010).

In their comprehensive review, Vestergren et al. (2017) identified 57 publications from 1967–2015 that analyzed the effects of protest and activism on people’s later lives, 39 of which focused on the US. The authors isolated 19 different subjective and objective outcomes, such as consumer behavior, marital status, religion or identity, self-esteem, empowerment, politicization, self-confidence, and sustained commitment. However, Vestergren and colleagues called for more longitudinal designs with suitable timing (i.e., starting before the protest and continuing after it) that can better capture the process of individual change. Obtaining information on attitudes and behaviors before (and not only after) participation in a movement is particularly difficult, since many protests are spontaneous.

From a quantitative perspective, research on this question typically is built on three types of data. First, we have event data that come from media, with the caveat that what is covered is not a representative sample of all the events that took place (Soule, 2013) and the difficulties of

connecting these events with participants' changes in attitudes and behaviors. Second, we have cross-sectional survey data, which usually provide only general indicators about protest participation. This kind of empirical evidence also imposes significant limitations when we seek to assess the biographical and individual impact of actual participation in specific protests. Finally, we have data from interviews with randomly-sampled demonstrators attending a specific demonstration; these are also problematic, because they do not include the counterfactual—i.e., people who did not participate—and they also come with their potential biases (Walgrave, Wouters & Ketelaars, 2016). To tap within-individual change in attitudes or behaviors due to protest participation, we should ideally rely on individual-level data measured before and after participation (or lack thereof) in specific protest events, but this is extremely unusual.

From a qualitative perspective, some previous studies have used ethnographic research and life stories, while others have employed mixed-methods, including questionnaires and semi-structured interviews (Auyero, 2003; Corrigan-Brown, 2012; Helader, 2016; Accornero, 2019; Betancor & Prieto, 2018, Nez, 2023). These approaches can help provide a more detailed picture of the nature of the underlying mechanisms involved in the socialization effects of experiencing protest events firsthand, but they still do not solve the problem of determining causal effect. In addition, these studies typically rely on a small number of qualitative interviews with a specific type of participants (generally left-wing activists); as a result, we cannot rule out that any observed change is due to, or limited to, individuals with that particular ideological leaning.

Moreover, most of these studies lack a reference group with less or no involvement in the protests, which prevents generalizable conclusions about the effect of participation on collective actions: in other words, what is observed in those who protested could also be present in those who did not. These analyses may also suffer from subjects' ex post rationalization or recall error, which may overestimate the amount of change generated by their involvement in the protest; as we will see in the next section, activists' perceptions of their experiences seem to be important conditioning variables of the effects of protest participation.

If it is difficult to identify the overall effects of protest participation, the difficulty is even greater when measuring long-term effects, which requires repeated measures over a long period of time. Vestergren et al. (2017) distinguish between short-term, medium-term, and long-term effects, although they suggest that the nature of each type differs according to how persistent they are:

while short-term effects would be of an emotional nature, long-term effects would deeply affect individuals' lives and even their personalities.

Expectations: Effects on political engagement and persistence over time

While the consequences of participation in protest events vary widely, in this study we focus on political engagement, as it is an attitudinal and behavioral dimension fundamental in democratic politics. We examine both an objective or behavioral dimension that incorporates actions that are typically included in the concept of participation (e.g., voting, volunteering, donating to political campaigns, or attending protests, see Burns, Schlozman, & Verba, 2001, p. 65), as well as a subjective dimension that includes attitudes such as political interest and internal efficacy (Verba et al., 1995; Neundorff & Smets, 2017). Internal political efficacy refers to an individual's subjective evaluation of their belief in their capacities to understand, navigate and influence politics (Craig & Maggionto, 1982; Balch, 1974). Similar to interest in politics, internal political efficacy precedes and predicts political participation.

The literature generally agrees on the notion that participation in protests has a socializing effect on activists, fostering subjective and objective political engagement in the short, medium, and long term. Several studies on cases ranging from black student activism to the violent summer of protest in Mississippi in 1964, the Portuguese student movement against the Estado Novo regime, and the May 1968 movement in France (Sears & McConahay, 1973; Ross, 2008; Accornero, 2018; Pagis, 2018; McAdam, 1988) have underscored the impact of earlier activism on future activism. Similarly, existing research suggests a reinforcing effect that goes beyond the individual's initial motivations and the duration of the movement (Giugni, 2004 & 2008). Thus, there is some evidence of the existence of long-term effects. Giugni and Grasso showed that participating in protests has a reinforcing effect on various indicators reflecting the political life of activists compared to non-activists (e.g., ideological placement, voting for left-wing parties, belonging to an organization or party) after fifteen years (2016, p. 96), but it does not seem to affect interest in politics.

In her analysis, Helader (2016) discovered that activism positively affects individual political participation in the long term; however, this effect is conditioned by the success of the movement and the perception that the authorities are receptive to it. Along the same line, Galán & Ferch (2020) found that participants in the Indignados movement had experiences and memories of the

demonstration that led to varying impacts on their long-term commitment: only if the memory of the Indignados movement was seen positively did it have positive effects on future participation or activism. Likewise, Betancor & Prieto (2018) and Nez (2023) highlighted the socializing effect of 15-M as depending on the individual's activist or non-activist background, as well as their evaluation of their experience in the assemblies; individuals who had a positive experience or prior activist involvement exhibited diverse and intense activism as a result. Pop-Eleches and colleagues found that participation in the Maidan Uprising in Ukraine increased the coherence of protesters' views on issues related to the protest and that they became more interested and effectual, at least if they were engaged in the early stages of the protest (Pop-Eleches, Robertson & Rosenfeld, 2022).

As for the mechanisms through which protest participation increases engagement, the literature identifies two main paths. The first is that protesting is a 'learning by doing' activity, a political experience with subsequent effects, much as voting in one's first elections may establish a voting habit (Plutzer, 2002). In different contexts, early experiences of political participation—be it at school, in the local community, or provided through institutionalized political education initiatives (e.g., mock elections)—have been found to boost civic skills and even adult political engagement (Hoskins et al., 2012; Verba et al., 1995; Keating & Janmaat, 2016). In this respect, existing research on May 1968 movement in France indicates that the effects are stronger on first-time activists (Haegel, 2020), given that young are especially susceptible to social pressures and political climates (Fillieule & Neveu, 2019).

Within this perspective, taking part in a protest event is also an immersive experience in an intense and sometimes critical political context, which entails being exposed to numerous political stimuli. For example, a learning process involving access to information and reflection in the deliberation processes was highly characteristic of the 15-M movement (Romanos, 2011) and led people to, e.g., look at elections differently (Galais, 2014). Corrigall-Brown (2012) argued that contact and interactions among participants may differ across social movement organizations and suggested that the effects on activists' trajectories should consider not only individual- and contextual-level but also organizational-level characteristics. The assemblies, the 'circles', and other organizational and deliberative decision-making structures that were characteristic of the 15-M would represent this meso-level.

The second path through which participation in protests can transform an individual's attitudes and behaviors is by means of rituals, symbols, chants, flags, etc., which increase a feeling of community and belonging to a group (Mariot, 2001). These rituals and memories, when retold in interviews, enable us to comprehend the significance of the individual and collective demands along with the preservation of the memory of that struggle (Auyero, 2003). As a result of participants coming together and promoting a collective activity, contagion and learning is possible, ultimately facilitating attitudinal and behavioral change.

Given all this previous evidence, our expectation must be to consider participation in protest events as an experience that enhances both subjective and objective future political engagement in the short, medium, and long term. However, we must also bear in mind that individuals' decision to join a protest is the result of their previous interests and attitudes—i.e., mobilization in a specific protest is the culmination of a previous political trajectory. The convergence model (Turner & Killian, 1972) posits that any observable effect in a mobilization (such as aggressive behavior) is simply the conclusion of previous predispositions (e.g., class, policy preferences). In other words, participants are probably very different from non-participants and similar to other demonstrators before the protest takes place. It may be that, compared to these initial differences between participants and non-participants, the effects of protests are relatively modest. While we do not see many null-effects results in the literature, not all contextual factors and educational initiatives aimed at enhancing political engagement are able to change attitudes in the direction that they intend or we expect (see for example Hernández & Galais, 2022), and we should remain open to this possibility.

Research design

The context: Spanish 15-M protests

In testing our expectations, we examined the case of the wave of 15-M protests that took place in Spain starting in May 2011. Following a large demonstration organized by Youth Without a Future (*Juventud Sin Futuro*) and Real Democracy Now (*DRY-¡Democracia real YA!*) on May 15, 2011, a group of people set up a tent protest at the Puerta del Sol, a central square in Madrid. By occupying the public space, the tent protest—which was quickly replicated in approximately 60 other Spanish cities—was an initiative peacefully employing civil disobedience and challenging the government. This was the birth of the 15-M movement, internationally known as the Indignados protest; it featured several months of tent protests, demonstrations, and public

meetings. It is estimated that approximately 6–8.5 million people took part in the initial wave of protests, between May 15 and August 2011 (Sánchez, 2013). 15-M was a major political event that garnered vast media coverage, and it had the potential to transform or reinforce citizens' attitudes.

The movement demanded more democracy and citizens' participation, and it also decried corruption and voiced a long list of complaints against austerity measures, which had been implemented by the Socialist government to deal with the consequences of the Great Recession. The initial 2011 demonstrations attracted individuals who were more politically competent, more politicized, and more distrustful than the average Spaniard (Anduiza, Martín & Mateos, 2014). This works against our objectives, as it would be harder to increase the engagement of a group of citizens that is already highly interested in and committed to politics. However, the average 15-M protestor was also more likely to be female, unemployed, and younger than people taking part in other protests in the same period (Anduiza, Cristancho & Sabucedo, 2014). The 15-M protesters were definitely more politically engaged than the average Spanish citizen, but at the same time they were significantly different from the usual participants in demonstrations.

The 15-M protests undoubtedly spread a feeling of intensity and exceptionality, which makes them a relatively 'strong treatment' and thus a favorable case for our study. The 15-M has previously been characterized as an "eventful protest", or a protest event characterized by an unusual concentration of political and cultural creativity that makes it particularly suited to triggering critical junctures and meaningful changes among participants and the audience (Portos & Carvalho, 2022).

The months-long tent protests enabled 'affinity groups' to emerge and for strong bonds to be formed on the basis of common ideals, problems, and experiences (Alberich, 2012). In the camps, individuals were heavily exposed to DRY's mottoes and slogans, which explicitly encouraged individuals to leave cynicism and apathy aside—e.g., occupy the street or be outraged, borrowed from Stéphane Hassel's viral manifesto—and which probably cultivated a strong feeling of belonging to a group (Mariot, 2001). There were also frequent public meetings and deliberation processes, described as 'rehearsals for revolution' (Alberich, 2012). The initial stages of the 15-M managed to transform the tent protests into something that went beyond what was originally planned: participants' initial feelings of indignation were joined by positive emotions such as joy, empowerment, and efficacy that arose after becoming involved in the movement (Perugorria &

Tejerina, 2013). Participation in the 15-M transmitted a sense of exceptionality. The tent protests and public meetings allowed participants to get to know each other and form groups of like-minded people, who stimulated each another with political ideas; they also provided participants with deliberative experiences and skills while exposing them to messages decrying political apathy and favoring political commitment.

Data and methods

To trace the socializing effects of the 15-M protests, we used the POLAT panel survey (Hernández et al., 2021). The survey's sample was restricted to Spanish citizens born between 1951 and 2000 who have internet access. The respondents were recruited by a commercial firm and are representative of the Spanish population in terms of age, sex, education, size of municipality, and region, with refreshments in waves 2, 5, 9, and 10. Table A1 in the appendix displays the characteristics of each wave used in the analysis: dates of the fieldwork, sample sizes, and the number of individuals that we consider 'treated' by the protest event (participants in the 2011 Indignados demonstrations, as measured in wave 3, the first wave after the event).

The research design employed in this paper significantly differs from the typical approach found in qualitative studies examining the biographical consequences of participation in protests, which often focus on activists (e.g. Fillieule & Neveu, 2019). The POLAT panel data allow us to observe changes in the attitudes and behaviors of participants and compare them with individuals who did not take part in the protests. This enables us to measure significant differences in attitudes and behaviors between the "control group" (non-participants) and the "treatment group" (participants) at various time-points after the protest. This approach more closely addresses the key counterfactual question compared to studies solely focusing on participants post-protest: what would have happened to the political engagement of these individuals if they had not participated in this significant protest event?

Participation in the 15-M protests was measured with a question asked in Wave 3 to those who had reported knowing about the Indignados/15-M movement (we mentioned both names for the movement). The question was: *Since May 2011, have you participated in any of the demonstrations, tent protests, marches, or protests of this movement?* A total of 360 individuals (19% of the sample) answered affirmatively; of these, 312 had already been already in the panel

in 2010, and the rest were added in a refreshment in wave 2. This number decreased as the study progressed due to panel attrition.

[TABLE A1 ABOUT HERE]

The POLAT study included several questions that tapped respondents' political attitudes and behaviors. To investigate our dependent variables, we selected two indicators of subjective political engagement: interest in politics and internal political efficacy. Political interest was measured with the customary question with four response options (not at all interested, a little interested, quite interested, very interested). Building on prior research on political efficacy (Karp & Banducci, 2008; Niemi, Craig, & Mattei, 1991), we measured this variable with a scale where 0 represents 'I find it difficult to understand what is going on in politics' and 10 'I think I have a good understanding of what is going on in politics.' We add to these two indicators of objective political engagement: participating in demonstrations and a scale including several participation modes (signing a petition, boycotting a company, donating money, and participating in strikes). Both refer to the previous 6 months.

For relevant controls, we considered sex, age, education, occupational status, region (autonomous community), and the size of the municipality where the respondent lives. All variables except age were rescaled to range from 0 to 1, and the wording of the questions is included in table A2 of the appendix.

Crucially, the first wave was conducted in November 2010, when it was impossible for respondents' engagement to be affected by participation in the 15-M protests, which had not yet taken place. We considered short-term effects as those occurring between November 2010 and November 2011 (waves 1 and 3, one year apart and capturing the effects at six months after the very beginning of the 15-M movement); we considered medium-term effects as those occurring between 2010 and 2013 (wave 5) and between wave 2010 and 2014 (wave 6); and we considered long-term effects as those that could still be observed in 2019 (wave 11).¹

¹ While "short-term" and "long-term" effects are, in our case, almost default options (defined by the first and last rounds available before the shock of the pandemic), we acknowledge that the choice of a midpoint is somewhat arbitrary. We chose wave 5 and wave 6 as the midpoints. Note that the number of available observations was higher in wave 5 (2013) than in waves 6 or 7 (1,757 and 1,071, respectively, for the number of respondents; 268 and 182, respectively, for the number of 'treated' individuals).

We deployed a differences-in-differences (DID) strategy. The DID technique is a quasi-experimental design that tracks a treatment group and a control group over time, estimating a causal effect by analyzing any significant differences in outcomes across the two groups that occur between pre-treatment and post-treatment periods. DID is typically used to estimate the effect of a non-randomized treatment by comparing changes in outcomes over time between treated and untreated (control group) individuals. This approach removes bias in post-intervention comparisons between the treatment group and control group that could have occurred before the intervention or that were due to different inertias. First, we compute the differences in a given outcome between treated and untreated individuals before the treatment is implemented (first difference). Then, we compute the differences in the same outcome between treated and untreated individuals after the treatment has taken place (second difference). Finally, we subtract the first difference from the second difference: if this third difference is significant, it indicates that the effect of the treatment influences the treatment group compared to the control group, even in consideration of all the pre-existing differences between the two groups.

Results

Tables 1 and 2 present the results for a series of DID analyses. These analyses account for the potential confounding effects of age, sex, education, size of municipality, region, and job market situation. Six months after the event, the effect of the 15-M is positive and significant for interest in politics and internal efficacy. Two years later, the effects increase; for interest in politics (but not for internal efficacy), the effect remains significant after three years. In the long term, they ultimately vanish for both indicators of subjective engagement.

Table 2 presents behavioral variables. In the case of demonstrations, we can only assess medium-term and long-term effects (in the short term, this analysis would confound our dependent and independent variables). For demonstrations, medium-term effects are significant in 2013 but not in 2014 or later. Similarly, results for the political participation scale indicate that indignados significantly increased their range of participation immediately and for a few years after the 15-M, but not in 2014 or later. By the end of the period under study we can even see that former 15-M participants were less likely to engage in a wide range of forms of participation than those that had not taken part in this specific protest.

[TABLE 1 AND TABLE 2 ABOUT HERE]

In summary, the 15-M protests experienced some, but not all, of the expected positive effects on the subjective and objective indicators of political engagement. The most remarkable observed effects are those related to participation in demonstrations in the short term: indignados showed an increased likelihood to demonstrate between 2010 and 2013—17 percentage points more than those who did not take part in the May 2011 demonstrations. Also remarkable are the effects observed on interest in politics, for which our results reveal an increase of seven percentage points between 2010 and 2013 for those who took part in the early stages of the movement compared to those who did not. The effects are equally noteworthy on interest in politics between 2010 and 2014 (six percentage points) and on internal political efficacy between 2010 and 2013 (six percentage points). The effects on subjective indicators increased over time and were even greater a couple of years after the event than immediately thereafter. However, no positive effects could be identified for any of the political engagement indicators after 2014. The sole significant effect for both subjective and objective indicators of engagement is inconsistent with our expectations and reflects a negative effect on the political participation scale.

Discussion

Our research has explored the temporal dynamics and enduring impact of participation in protest events, focusing specifically on the 15-M protests in Spain. Utilizing a unique panel survey spanning nine years (2010–2019), we have addressed methodological challenges that allow to gain insights into the socializing effects of protests on participants' political engagement. Our research design incorporates information on individual-level indicators of objective and subjective political engagement before and after participation in the 15-M protests, offering a comprehensive view of both participants and non-participants over an extended period.

The immediate aftermath of the 15-M protests and a two-year follow-up revealed positive effects on various indicators of political engagement among participants. Participation in the 15-M protests seems to have increased interest in political issues, confidence in participants' capacity to understand and influence politics, and involvement, through different participation modes. This confirms previous qualitative work suggesting that “by participating in 15 M, the respondents had become aware of their individual and collective ability to change their social reality. These empowerment trajectories were conspicuous among the newcomers to collective action” (Nez, 2023:314). However, our analysis exposes a nuanced aspect—the observed effects tended to diminish over the long term, with almost no lasting trace of the socializing impact of the 15-M

protests eight years after the events. This complements existing works indicating limited biographical changes resulting from the 15-M protests (Nez, 2016; Betancor & Prieto, 2018).

Several factors could explain the lack of support for the long-term hypothesis. Firstly, we might be missing some relevant outcomes that the nature of our data and methods do not allow us to gauge. Survey questionnaires, by their very nature, do not capture the nuances and experiences found in qualitative studies on activism. Our measurement of individuals' involvement in these protests was confined to a standardized set of indicators (established before the *indignados* started its activity), and we could only test the impact of such participation on the restricted set of attitudes and behaviors for which we have the necessary data. The potential consequences of different forms of participation across various aspects of life are innumerable, and our testing covered only a fraction of them. It could be that long-term effects are present in other attitudes and behaviors that we have not contemplated here, such as citizen empowerment, organizational skills, or learning. Qualitative studies are better equipped to include a broad range of indicators, but they are also, as we have argued, less able to accurately assess the size of these effects, considering that activists self-select into participation based on their previously high levels of subjective and objective engagement.

Second, it is plausible that those remaining in the panel are individuals for whom the 15M protests mattered less. However, we find this unlikely, as active engagement, a product (and as predictor) of participating in the 15M, would make individuals more likely to respond to a political survey like POLAT.

Thirdly, the impact of the 15M movement may have extended beyond the direct participants, influencing even those who were mere spectators. While active participants likely had an intense and immersive experience, the visibility of the movement may have also left an impression on non-participant observers to some degree. However, it is important to acknowledge that the potential underestimation of the effects on participants could be more pronounced in the short and medium-term, particularly when the 15M activities were recent and extensively covered by the media.

Furthermore, it is possible that individuals who had initially been unaware of or impervious to the 15-M movement became involved in later stages, which would work against the evidence for our hypothesis of the long-term effects. However, our results are consistent with previous works on

“activist fatigue” (Nez, 2023:317), which is also a potential consequence of participation in protests, although one that is less visible in the literature. Contextual elements such as the supply of protest organizations also varied importantly, providing fewer opportunities for engagement after a certain time point. The year 2012 marked the highest level of protest events in Spain, with numbers declining after with 2015 to reach the low levels typical of the first decade of the 21st century. (Adell & Olayo, 2014; Portos, 2021). Nevertheless, the number of protests, and more interestingly, the number of protestors, increased significantly in 2016 and 2017, reaching figures which are higher than the ones observed in 2011 or 2012 (Romanos & Sádaba, 2022), so it seems that opportunities for participating fluctuated during the period we are considering.

In this respect, while the implicit assumption is that time plays a linear role—with effects progressively fading away—our findings show a different pattern. The greatest differences were not found immediately after the protest events took place. This may be because in 2013, Spain was still experiencing austerity-related protests, with numerous demonstrations taking place (Portos, 2016) and high levels of concern being expressed about the political and economic situation, which may have helped to enhance the effects. This confirms Bosi & Uba’s (2009, p. 410) argument that the results of collective action are not static and linear and can depend on many factors. In terms of the biographical impacts of 15-M, Betancor & Prieto (2018), with their qualitative approach, asserted that such progressive effects will be smaller if activism is abandoned after a short time. Our quantitative results support both ideas, reinforcing that the socializing effects of participating in 15-M are highly context-dependent rather than linear through time.

Finally, it is possible that the emergence of Podemos may have transformed a significant portion of preceding protest actions into electoral support by presenting protesters with a cost-effective mode of participation, namely voting (Galais, 2014). The electoral landscape at our long-term reference point in 2019 supports this idea, providing former protestors with ample opportunities to articulate their views through voting. The numerous elections conducted in 2019 indicate that long-term effects could potentially emerge later, in a distinct context, based on the emotional, knowledge, and organizational culture legacy left by the Indignados (Romanos, 2013; Calvo, 2013). Nevertheless, while subsequent research may reveal enduring effects at a certain juncture, we cannot dismiss the hypothesis that these long-term effects of participating in the 15M may be relatively weak, given the current available data.

Our research design helps to overcome some previous research limitations, but not all of them. It remains difficult to isolate the effects that can be attributed to these protests from other aspects of the political and electoral context. Other methodological limitations include the small number of individuals who reported participating in the 15-M protests in our last wave of the panel, and the study period of eight years compared to other longitudinal analyses that cover twenty years or more (McAdam, 1988). Moreover, we are aware that a solely quantitative approach does not capture the nuances and experiences found in qualitative studies on this subject. Our results should be complemented by qualitative interviews, to contrast the narratives of participants and non-participants. Meso-level analyses of the conditioning role of various organizational features are also much-needed research, as the types, leadership, and/or structures of the assemblies could determine the socializing impact of protest participation.

In essence, our research underscores the complexity of the relationship between protest events and individual political engagement. The systemic and individual consequences of protests may not always align, emphasizing the need to distinguish between their impact on the political system and their influence on participants' lives. The 15-M protests, while transformative at the systemic level, exhibit more modest and short-lived effects at the individual level. In this way, our findings contribute to the broader discourse on the multifaceted outcomes of protest events and the intricate interplay between collective actions and individual political engagement.

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Table 1. 15-M participation effects on attitudinal variables (DID)

Period	Interest in politics				Internal political efficacy			
	2010-2011	2010-2013	2010-2014	2010-2019	2010-2011	2010-2013	2010-2014	2010-2019
Diff-in-diff	0.0406*	0.0704***	0.064**	0.0267	0.0381*	0.0625**	-0.014	-0.00278
	(0.0229)	(0.0248)	(0.029)	(0.0310)	(0.0225)	(0.0244)	(0.028)	(0.0300)
Observations	3,394	2,925	2,352	2,206	3,394	2,925	2,352	2,206
R-squared	0.108	0.125	0.121	0.107	0.102	0.107	0.095	0.094
Mean control t(0)	0.212	0.0807	0.365	0.321	0.674	0.125	0.448	0.727
Mean treated t(0)	0.281	0.148	0.434	0.392	0.719	0.168	0.495	0.775
Diff t(0)	0.0693	0.0671	0.068	0.0707	0.0445	0.0428	0.047	0.0480
Mean control t(1)	0.188	0.0473	0.333	0.292	0.682	0.132	0.483	0.746
Mean treated t(1)	0.298	0.185	0.465	0.389	0.765	0.238	0.516	0.791
Diff t(1)	0.110	0.138	0.132	0.0974	0.0826	0.105	0.033	0.0452

Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 2. 15-M participation effects on behavioral variables (DID)

Period	Demonstrations			Political participation scale			
	2010-2013	2010-2014	2010-2019	2010-2011	2010-2013	2010-2014	2010-2019
Diff-in-diff	0.170***	0.008	0.033	0.044**	0.041*	-0.037	-0.072**
	(0.039)	(0.042)	(0.047)	(0.021)	(0.023)	(0.027)	(0.029)
Observations	2,925	2,352	2,206	3,394	2,925	2,352	2,206
R-squared	0.152	0.101	0.107	0.139	0.128	0.108	0.122
Mean control t(0)	-0.591	0.067	0.822	0.212	0.362	0.212	0.0870
Mean treated t(0)	-0.329	0.333	1.085	0.395	0.543	0.392	0.267
Diff t(0)	0.262	0.265	0.263	0.183	0.180	0.180	0.180
Mean control t(1)	-0.484	0.046	0.779	0.178	0.380	0.186	0.00871
Mean treated t(1)	-0.0522	0.319	1.075	0.406	0.601	0.329	0.116
Diff t(1)	0.432	0.273	0.296	0.227	0.221	0.143	0.108

Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Appendix.

Table A1: Panel survey waves

	Fieldwork	N	Refreshment	N that in W3 reported participating in the 15-M protests
Wave 1	Nov. 2010	2100	No	312
Wave 2	May 2011	2433	Yes (620)	360
Wave 3	Nov. 2011	1979	No	360
Wave 5	May & Oct. 2013	1757	Yes (845)	268
Wave 11	June 2019	1748	No	114

Table A2. Question wording

15-M Participation	(Question posed in November 2011 (wave 3), only to those who answered previously that they had heard about the Indignados movement. 97.5 of the sample answered yes and were asked the subsequent question) <i>Since May 2011, have you participated in any of the demonstrations, tent protests or marches of this movement?</i> <i>Yes/No</i>
Interest in politics	<i>Are you interested in politics?</i> <i>Very/ Quite/ Somewhat/ Not at all</i>
Internal political efficacy	<i>With the help of this scale, indicate from 0 to 10 where you stand with respect to the following statement:</i> 0 1 2 3 4 5 6 7 8 9 10 I find it difficult to understand what is going on in politics I think I have a good understanding of what is going on in politics
Participation in demonstrations / Political Participation Scale	<i>Think about the last 6 months. Have you done any of the following?</i> <i>This time we ask you to think about actions that you have carried out not only online, but also on the street, in person, by letter, etc.</i> <i>Yes/ No</i> <i>a Signed a petition</i> <i>b Bought or stopped buying certain products for political, ethical or environmental reasons</i> <i>c Contacted a politician to express your opinions</i> <i>d Donated or raised money for a cause</i> <i>e Attended a demonstration</i> <i>f Joined a strike</i> Participation in a demonstration is treated as a dummy variable. The other items are combined in an additive index.
Education	<i>What is the highest level of education that you have completed?</i> - <i>Less than 5 years of schooling</i> - <i>Primary education</i>

	<ul style="list-style-type: none"> - <i>Basic general education (up to 14 years of age)</i> - <i>Compulsory secondary education</i> - <i>Intermediate Vocational Training</i> - <i>Upper secondary (new system)</i> - <i>Upper secondary (old system)</i> - <i>Higher Vocational Training</i> - <i>Undergraduate university studies (3 years)</i> - <i>Undergraduate university studies (>3 years)</i> - <i>Postgraduate studies or specialization</i>
Job status	<p><i>What is your current occupational status?</i></p> <ul style="list-style-type: none"> - <i>Working</i> - <i>Retired/pensioner (I have worked in the past)</i> - <i>Pensioner (I have not worked in the past)</i> - <i>Unemployed but I have worked before</i> - <i>Unemployed and looking for my first job</i> - <i>Student</i> - <i>Homemaker</i> - <i>Other</i>
Region where respondent lives	<ul style="list-style-type: none"> - <i>Andalusia</i> - <i>Aragón</i> - <i>Asturias</i> - <i>Balearic Islands</i> - <i>Canary Islands</i> - <i>Cantabria</i> - <i>Castile and León</i> - <i>Castilla-La Mancha</i> - <i>Catalonia</i> - <i>Valencia Region</i> - <i>Extremadura</i> - <i>Galicia</i> - <i>Madrid</i> - <i>Murcia</i> - <i>Navarra</i> - <i>Basque Country</i> - <i>La Rioja</i> - <i>Ceuta</i> - <i>Melilla</i>
Size of municipality where respondent lives	<ul style="list-style-type: none"> - <i>Under 50,000 inhabitants</i> - <i>50,000 – 500,000 inhabitants</i> - <i>Over 500,000 inhabitants</i>