The slacktivism crossroad: causal relationships between online and offline political participation

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Abstract

The consequences of online participation for offline political engagement have been analyzed with contradictory expectations and results. On the one hand, the "slacktivism" perspective considers that online participation may satisfy citizens enough to prevent them from taking part in more demanding modes of action. On the other hand, the "spillover" perspective considers online engagement as a first experience that may boost ulterior offline participation. Using panel data from Spain we show that there are important positive spillover effects of different modes of online participation over offline engagement, including turnout and participation in demonstrations and strikes. The effects seem to be fairly persistent along time. Contrary to what the literature suggest, attitudes do not seem to mediate in this relationship.

Keywords: online participation, turnout, protest, strikes, slacktivism

Introduction

In February 2013, over one million Spaniards signed a Chage.org petition calling for the entire Spanish government to resign, after the last corruption scandal was revealed. The amount of participants can be considered a success without precedents in the country. Nevertheless, demonstrations in the Spanish streets, which had followed an increasing trend since 2008, decreased the following year. In February 2016, another Change.org petition against a labor law project by the French government also reached 1 million signatures. Although –unlike the Spanish example-the French online mobilization had an offline version, echoing the success of the online petition in massive demonstrations in April 2016; it did not achieve their main goals. Examples like these not only boost scholar scepticism regarding the effects of online participation, but highlight their growing expansion and the subsequent effects of online participatory experiences on the attitudes and behaviors of the citizenry.

On this respect, the literature is far from reaching a consensus. Two schools of thought collide. The first one holds optimistic views about online political participation, considering digital activism a first experience that may spur further offline engagement. This perspective has referred often to two major episodes in the history of online participation: the 2008 U.S. presidential online campaign and the 2011 Arab spring. According to these scholars, a positive experience with political participation in the Internet may serve as a stepping stone which will have positive spillover effects on other political behaviors. On the other hand, pessimistic views about online political participation consider these forms of political engagement online too "easy" -even "lazy"-, its effects too uncertain and fuzzy to be regarded as actual examples of political

participation. According to this perspective, such forms of "slacktivism" would have no effects on other more meaningful and effective forms of political engagement, or may even have a negative effect. Individuals performing online forms of activism will fulfil their needs of self-realization through participation at a very low cost without feeling compelled to engage themselves in collective actions offline. Previous work seems to be inconclusive, with some studies showing data consistent with the slacktivism thesis (Schumann & Klein, 2015), while others support the spillover thesis (Conroy, Feezell, & Guerrero, 2012; Gil de Zúñiga, Molyneux, & Zheng, 2014; Kim, Hsu, & de Zúñiga, 2013; Vissers & Stolle, 2014; Vitak et al., 2011).

Whether online participation has a substituting or an engaging effect with regards offline participation is an empirical matter that needs to be addressed with an appropriate research design. Only recently adequate experimental or longitudinal research designs have been available for that purpose.

Our paper makes three main contributions to the empirical analysis of this question. First, we prove a longitudinal research design that allows assessing the strength, the direction and the persistence of these of these effects. Second, it examines a variety of online participation modes and their respective consequences for actual participation in three offline modes: turnout, participating in demonstrations and participating in strikes. Third, we explore the mediating role of attitudes to enlighten the causal mechanism behind this relationship.

The paper is structured as follows. Next section outlines the different arguments that account for the relationship between online engagement and offline political participation. Section 3 presents the data and the research design. Section 4 presents the results of the analysis. Finally section 5 concludes.

Theoretical framework

Online forms of participation such as signing a digital petition, donating online or contacting a politician through the Internet are considered lightweight, low-cost, low-threshold and low-risk forms of collective actions (Van Laer& Van Aelst, 2010). Because of its nature, some expect online participation to popularize political activism, making it accessible for individuals with lower degrees of political sophistication or with fewer resources, including the lack of friends or acquaintances involved in politics, hence mobilizing them to take actions offline.

However, from a more critical perspective, these forms of online activism have been described as "lazy" (Morozov, 2009), too easy, and naïve in their pretension that critical problems may be addressed and solved with just one click (Gladwell, 2010; Barney, 2010). The term "slacktivism" (Morozov, 2009; Christensen, 2011) is used to emphasize the weak nature of online participation. According to this perspective, slacktivism fulfils hedonistic needs (Kristofferson et al., 2014; Lee & Hsieh, 2013) such as making a positive impression on the audience (Postmes and Brunsting 2002). The immediate consequence would be a substitution effect of online activism, derailing offline "true", relevant participation (Shah, Kwak et al. 2001; Shah, McLeod et al. 2001; Jennings and Zeitner 2003; Morozov 2009; Baumgartner and Morris 2010).

Among the papers that have specifically addressed this question (that is, the consequences of online participation), the evidence to date is mixed and presents some significant methodological limitations. From an optimistic perspective, some works present findings supporting a positive spillover effect of online participation over offline participation (Conroy et al., 2012; Gil de Zúñiga, Jung, & Valenzuela, 2012; Y.

Kim, Russo, & Amna, 2016; Vissers & Stolle, 2014; Vitak et al., 2011). Most of these works, however, raise some validity concerns as they are often base on observational evidence coming from small and convenience sample of students. For instance Vitak et al. find that political activity in Facebook is a significant predictor of offline participation in an ongoing election (Vitak et al., 2011). Their results are based in a single cross sectional survey of students. This raises concerns both on the external validity of the conclusions (will the relationship be the same in the general population?), but also on their internal validity, as the correlation between both types of political activity do not necessarily imply causation.

A more sophisticated analysis is carried out by Conroy and associates. They find a positive effect of political group membership and a scale of offline political participation Their analysis is also based on a convenience sample of US college students, but their it includes instrumental variables to address endogeneity concerns (Conroy et al., 2012). The effects they find seem to be robust, but they call for panel data as a better strategy to address this causal relationship between online and offline modes of participation.

Gil de Zúñiga, Molyneux, and Zheng (2014) find an effect of social media political expression on a scale of offline political participation when inquiring more broadly about the consequences of social network sites, but both variables are measured at the same time point (second wave of the panel) and hence causality cannot be assessed.

Visser and Stole use a two wave panel, based on a convenience sample of Canadian students (Vissers & Stolle, 2014). Their analysis detects some spillover effects of joint scales of Facebook political participation (shares, joined group, liked, started group) and online participation (signed, donated, contacted) on offline participation. A similar strategy with scales of participation and a two wave panel based on a convenience sample of students in a Orebro, Sweden, is deployed by Kim et al., who confirm their proposed gateway hypothesis: online participation has an effect on offline participation, but only for adolescents, and not for young adults (Kim et al., 2016). Cantijoch et al. (2016) use a UK pre and post electoral survey to address the effects of e-participation on offline participation. Their conclusions are that more demanding, active forms of online participation do not have a mobilizing effect on offline engagement, but that e-information practices are a stepping stone to other forms of participation. All in all, these panels are so short that they do not allow assessing the effects of online participation beyond the exceptionality of an electoral context or to test the degree of persistence of these effects.

On the other hand we have some experimental evidence pointing to the opposite direction. Schumann & Klein find a demobilizing effect of online participation on willingness to join panel discussions and demonstrations and likelihood to sign a petition (Schumann & Klein, 2015). They run three experiments in which the possibility to perform slacktivist actions is randomly assigned. However in their design the treatment involves both the possibility for slacktivism as well as longer time in the experiment, which may also account at least partially for the negative effects found. Those in the treatment condition had to do many more things that those in the control group. The limitations of experimental research designs allow questioning whether willingness to perform offline actions can be considered equivalent to measuring actual behavior. The authors emphasize the need for a closer look at the dynamics of the relationship between online and offline collective actions.

Hence, we have on the one hand some observational evidence which analyses actual behavior and finds positive spillover effects, but with limitations regarding both internal validity (limited identification strategies, limitations to evaluate persistence) and external validity (small convenience samples). Most of them (but see Cantijoch et al 2016) tend to treat all modes of participation together in scales of online and offline

behaviours, without distinguishing different modes. On the other hand we have experimental evidence that finds negative effects of online participation over willingness to perform offline participation, but limitations to assess actual behavior.

One possible reason for these mixed effects is a lack of attention to the effects of intervening variables that could modify the ultimate effects of online political activity. On this respect, the slacktivism perspective has paid some attention to the mechanism mediating between online and offline participation. Slacktivism is supposed to provide a feel-good factor for participants regardless the actual impact of their online activism on the real world (Kristofferson et al., 2014; Lee & Hsieh, 2013). The satisfaction of individuals' ego might be the mediating variable that ultimately hampers their ulterior involvement in online activism. Moreover, the exposure to radical views about politics through slacktivists' networks might undermine views about traditional political institutions and actors, damaging the chances to participate in politics by other means. Schuman and Klein however, find that those in the treatment group (offered to perform online participation) were not feeling any better, more important or more confident than the control group (2015). Online participation was simply perceived by participants as a valid tool in the repertoire of contention. Hence, the mechanism argued by the slacktivism thesis is not clearly supported by existing empirical evidence. We expect trust (or more specifically, a decrease in political trust), and (an increase of) life satisfaction to mediate potential negative effects of online participation on offline political behavior.

Causal mechanisms can also be envisaged for positive effects. Online participation can invigorate and empower citizens without a previous experience on participation, giving them a satisfying taste of political engagement and providing them with some resources (arguments, networks, motivation) to undertake offline participation. This is equivalent to expect a motivating effect of online on offline participation or, in other words, an increase in the individual's levels of political interest that will further drive him or her to the streets to perform more traditional forms of political engagement (Holt et al. 2013).

Drury and Reicher (1999, 2005) have shown that a growing sense of power and confidence in their abilities to challenge authorities is observed after offline experiences of participation. Internal political efficacy is known to have a positive effect in political involvement (Craig & Maggiotto, 1982; Wolfsfeld, 1986). In the digital domain, political efficacy has also proven to connect digital media use and political participation (Jung et al., 2011; Shi, Chen & Tian, 2011), as this attitude has further positive effects on individuals' social networks and political interest, all of which increases the chances to get involved in politics (Gibson, Lusoli, & Ward, 2005). Park (2015) finds that internal efficacy conditions the relationship between social interaction uses of SNS (social network sites, e.g. Facebook) and participation, in the sense that efficacy reinforces the effects of online social interactions and offline expressive participation (Park, 2015). We posit that efficacy is not only a moderating variable, but a mediating one, a likely output of online political activity that might have further positive effects in offline activism. We would hence expect a mediating effect of interest and efficacy.

Another reason for conflicting findings may be found in the lack of differentiation of participation modes, as most works rely on single modes or indexes. Recently, Cantijoch et al. (2016) have accepted this challenge analyzing separately the effects of different types of online participation on different of offline engagement modes. The authors emphasize the role of the targets and channels of such actions, in the sense that online activities taking place in the domain of formal representation (donating, contacting) would have a stronger affinity and effects on more institutional offline forms of participation. Similarly, petitioning and other online extra-representative forms of online participation would have a greater effect on offline political activities that do not relate to the representative logic. However their data do not support any significant

effects of online modes on offline participation, and hence the question remains open.

To sum up, previous work on the causal relationship between online and offline participation is limited by contradictory findings and restricted data that do not allow to adequately test for causal relations and their mediators, assess the consequences of differentiated modes of online participation on actual offline behavior, or estimate the durability of these effects. We intend to address these aspects by testing some specific expectations.

In the first place, we expect online participation to have positive effects on ulterior offline participation. Given that the amount of empirical evidence in favor of the spillover hypothesis outweighs the one offered by the slacktivist perspective, and in spite of its methodological limitations, we expect to find that engaging in online participation can indeed serve as a stepping stone for further offline political involvement. Second, we expect online participation related to political representation to have stronger effects on offline forms of institutional participation; and extra-representative forms of participation to have a greater effect on offline, non-institutional forms of participation. Third, we expect these effects to be persistent along time. Finally, we expect attitudes to mediate these effects: changes in life satisfaction produced by online participation should be able to explain reductions in offline participation- if these were the case-, while increases in political efficacy, trust and interest as a product of online participation should explain increases in offline participation.

Research Design.

For the purpose of unraveling the relationship between offline and online participation, we use data from an eight-wave online panel survey including Spanish citizens between the ages of 16 and 45 (in wave 1) with internet access. The longitudinal nature of the data allows us to analyze not only the effect of different forms of online political participation on ulterior offline activism, but also its persistence and the mediating role of political attitudes likely to convey such engaging or disengaging effect.

The survey includes several indicators of online and offline political participation. As for the offline forms, a question asked about having participated in a demonstration or a strike "during the last six months" (therefore covering totally or partially the time span between one wave and the next). These questions are coded as dummies, where 1 indicates presence of the action and 0 absence. Questions about turnout in the 2011 and the 2015 general elections have been recoded so that 1 indicates having voted in the last general election and 0 indicates abstention.

A battery of questions asked about engagement over the course of the last year in the following online activities: signing a petition or manifest, contacted a politician and make a donation for a party or a campaign. Three more questions tapped on political communication uses of the internet asking whether or not the individual had expressed over the course of the last year his/her opinion on political issues through a) social networking sites, b) blogs, forums or websites, c) email. Note that this corresponds with the division existing in the literature between active and passive forms of online political engagement, the later being those types related to news and discussion (Gibson and Cantijoch 2013). Note as well that at least one of these online forms of participation is clearly linked to the political representation logic (contact). While all the examples of e-communication are clearly extra-representative, it is unclear whether or not petitioning and donating are related to political institutions. Given the specificities of the Spanish

political arena, it is likely that petitions (although citizen-initiated) are more connected to the classical channels of political representation than donating, whose main recipients in Spain are NGO's, political awareness campaigns and grassroots associations. All these questions yielded dichotomous indicators where 1 indicates having performed such activities and 0, not having performed them.

Tables 1 depicts the distribution of our main independent variables through our study Table 2 shows the distribution of our operationalization of behaviour change between waves. For the latter, we have considered change and continuity in the performance of the behaviour taking into account each variable and its lag. Hence, an individual scoring zero in both waves of a variable (e.g. online donation) indicates that this individual has persisted in not performing such form of participation between two waves. The total number of observations in this table corresponds to the number of "pairs" of waves for which we have information for each individual.

Table 1. Online and offline participation forms incidence

Wave	online petition	online contact	online dona-tion	online opi-nion email	online opinion SNS	online opinion blog	Turn-out	Demons-trations	strikes	N
1	0.41	0.09	0.03	0.33	0.36	0.27	0.73	0.21	0.25	2100
2	0.38	0.11	0.02	0.28	0.35	0.23	0.71	0.20	0.19	2433
3	0.37	0.11	0.02	0.38	0.28	0.22	0.74	0.22	0.14	1979
4	0.42	0.11	0.02	0.47	0.30	0.22	0.79	0.29	0.30	1717
5	0.53	0.09	0.02	0.25	0.46	0.21	0.79	0.33	0.30	1757
6	0.55	0.08	0.04	0.18	0.44	0.19	-	0.26	0.18	1071
7	0.51	0.08	0.03	0.16	0.42	0.19	-	0.20	0.13	1014
8	0.56	0.07	0.03	0.15	0.39	0.15	0.85	0.18	0.09	1040

Table 2. Patterns of online political participation between waves

	online petition	online contact	online donation	online opinion email	online opinion SNS	online opinion blog
Did not perform it in neither waves	41.95	85.23	95.60	54.68	48.69	68.19
Stopped performing it	11.96	4.88	1.91	14.90	14.85	10.87
Started performing it	14.71	4.91	1.96	13.24	15.09	8.77
Continued performing it	31.38	4.99	0.53	17.18	21.38	12.17
Total (N)	9,271	9,247	9,247	9,323	9,323	9,323

The less popular online participation form is online donation, followed by online contact. They were performed by a 3% of the sample on average along the study. Online donation, moreover, exhibit a greater degree of stability, in the sense that 95.6% of the sample persisted in not performing this type of political engagement. About 9% of the sample has ever contacted a politician online during the time span covered by our study, and about 5% of them started at some point to do it during our study. Similar percentages are observed for the categories "stopped doing it", and "continued to do it".

On the other hand, petitioning online and expressing one's political views through social networking sites are the most popular forms of online political activity. They were performed by 47% and 38% of our sample at some point, respectively, on average. Almost 15% of individuals freshly started to petitioning (not having done this in the six months prior to a panel wave) or did so in the case of discussing politics through social networks. These are the highest percentages observed of online activities able to attract new participants, followed by expressing political opinions by means of emails

(13%) or blogs (about 9%). These are also the three types of online participation that retain more people between waves, this is, that are able to attract the same individuals from one wave to another; but also the ones that suffer from more attrition, this is, individuals that perform this types of participation in one wave but not in the next.

We will estimate the likelihood of engaging in demonstrations, strikes and voting making the most of the panel structure of our data. For this, we have followed a similar procedure than Margalit (2011): we estimate the dependent variables measured in time t using a lag of the dependent variable at t-1 and measures of change with respect to that previous wave for the main independent variables: the six different forms of online political involvement. The model could be represented as follows,

$$P_{i,w} = logit\ (\beta_0 + \beta_1\ P_{i,w-1} + \beta_2\ Change_{i,\ w-(w-1)} + \beta_3 Wave + \beta_4 Controls + \varepsilon_i) \qquad [eq.1]$$

Where $P_{i,w}$ is offline participation at wave w, $P_{i,w-1}$ is this same variable at time w-1, and Change is change in online behaviour between wave w-1 and wave w with the four possible values reported in table 2: did not report in both waves, started to, stopped to, reported it in both waves.

Given the dichotomous nature of our three dependent variables (turnout, demonstrating, striking), we will estimate the effects of these online participation forms using a series of logistic estimations. More specifically, we will pay attention to the impact of starting to perform these online forms of participation (short-term effects) and having done them in the previous wave but not in the current one (long-term effects), taking as a reference category not having done them in either waves. Note that if we detect a significant effect of "having performed an online participation form in the past wave, but not in the current one" this would be indicating persistent effects of the online activity on our dependent variables.

We control these effects by the usual suspects in the literature on political participation: age, sex, education, and ideology. Given that strikes can only be performed by workers, we will take as well into account individuals' labor status; and due to the digital character of our independent variables we will approximate some resources that are specific of the Internet domain (digital literacy, connection availability, leisure time, whether or not the individual uses a computer for his job) with a variable tapping the amount of hours that the individual spends online every day on average (1 to 8 hours). We have included dummies for each available panel wave in order to account for time - fixed effects, clustering the standard errors per individual.

We have also estimated the effects of the evolution in online political behavior on the evolution of offline participation with a series of panel, fixed effects, models in which the independent variables have not been recoded to indicate change between waves. If the same patterns are found, this will proof the robustness of the results obtained with the first strategy. The model can be specified as follows:

$$Yi_w = \beta1 X_{iw} + \alpha_i + \delta_2\ T_2 + ... + \delta_8\ T_8 + u_{iw} \qquad [eq.2]$$

Where αi (i=1....n) is the unknown intercept for each individual, Y_{iw} is the dependent variable, where i refers to each individual and w to each wave. X_{iw} represents an independent variable, and – $\beta1$ is the coefficient for that IV. Regression coefficients should then be interpreted as the effect, for a given individual, of X on Y when X varies *across time* by one unit. T is a dummy for each wave (so we have t-1 =7 time periods maximum), δ_2- δ_8 are the coefficients for the binary time regressors (waves), and u_{iw} is the error term.[1]

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[1] The time fixed-effects control is included in order to account for unexpected variation due to special events such as the two elections held during the study.

The next step in our analysis is to test for the possible mediating effects of the four attitudinal variables suggested in the theoretical framework. For this, we will follow the classic Baron and Kenny's(1986) causal step approach. We include these attitudes in the same models specified above (*[eq.1]*) and see if they reach statistical significance while reducing the explanatory power of online political participation types.

Results

Tables 3, 4 and 5 present the results of our logistic estimations for our three dependent variables: turnout, and participation in demonstrations and strikes, respectively. In each of these tables, six models are presented side by side. In each model (column), only one mode of online political participation is considered.

The first series of models (table 3) addresses the effects of online participation on turnout. We identify an overall positive effect which is particularly remarkable for expressing opinions by means of email, online contact and online petition, whose coefficients must be interpreted in comparison to the reference category (not having performed such activities between two waves).

Table 3. Logistic estimation of turnout (2011, 2015).

	(1) Online petition b/se	(2) Online contact b/se	(3) Online donation b/se	(4) Opinion email b/se	(5) Opinion SNS b/se	(6) Opinion Blogs b/se
Lagged turnout	2.954***	2.957***	2.970***	2.926***	2.933***	2.950***
	(.085)	(.086)	(.086)	(.085)	(.085)	(.085)
Started to perform online participation	.332**	.390*	-.556+	.493***	.325**	.192
	(.116)	(.183)	(.288)	(.117)	(.108)	(.135)
Stopped performing online participation	.145	.412*	.168	.390***	.218+	-.018
	(.129)	(.173)	(.252)	(.105)	(.113)	(.120)
Continued performing online participation	.361***	.541**	-.226	.557***	.555***	.464***
	(.086)	(.172)	(.490)	(.098)	(.100)	(.110)
Age	.015**	.015**	.014*	.016**	.016**	.016**
	(.005)	(.006)	(.005)	(.005)	(.005)	(.005)
Woman	-.046	-.048	-.077	-.030	-.035	-.022
	(.070)	(.071)	(.070)	(.070)	(.070)	(.071)
Education	.163***	.176***	.190***	.167***	.182***	.183***
	(.045)	(.045)	(.045)	(.045)	(.044)	(.044)
Internet time	.006	.014	.021	-.006	.000	.007
	(.027)	(.027)	(.027)	(.027)	(.027)	(.027)
Worker	.125	.119	.106	.110	.114	.107
	(.081)	(.081)	(.081)	(.081)	(.081)	(.080)
Left-Right scale	.022	.007	.007	.012	.011	.007
	(.020)	(.020)	(.020)	(.020)	(.020)	(.020)
2.wave	-.322***	-.357***	-.355***	-.325***	-.343***	-.375***
	(.089)	(.089)	(.088)	(.091)	(.091)	(.088)
3.wave	-.074	-.121	-.113	-.122	-.074	-.125
	(.097)	(.096)	(.096)	(.098)	(.099)	(.096)
4.wave	.239*	.195+	.203+	.173	.266*	.198+
	(.106)	(.105)	(.105)	(.110)	(.107)	(.105)
Pseudo R-Squared	.308	.309	.305	.311	.310	.308
N	6817	6806	6808	6863	6863	6863

Standard errors in parentheses. + p<0.1, * p<0.05, ** p<0.01, *** p<0.001
Reference category for wave= 1.   Reference category for online participation: not performed online participation within the two waves under analysis. Only four waves include relevant turnout information.

This confirms our two first theoretical expectations. Not only online participation seems to have a general positive effect on offline participation, but e-participation related to institutional representation has a greater effect on offline institutional participation, such as turnout. The exception would be the remarkable coefficient associated to an extra-representative, e-communication form (expressing political opinions using email). Although at this point interpreting this effect is merely a guess, it is possible that the type of social relationships in which citizens engage using email (professional, familiar… strong ties in all cases) enforces the social norm that voting is a duty and has a positive overall effect on the probability to turnout.

Conversely, expressing one's opinion through blogs has no effect on voting. Online donation, which was formerly depicted as a particularly unpopular form of online participation –and is probably more related to ONG's and social campaigns than to parties-, has a negative effect on the likelihood of voting. It remains to be seen if such activity boosts political distrust or a kind of satisfaction that will substitute the need/duty to vote. As for the coefficient gauging long-term effects (corresponding to the category stopping performing the aforementioned online activities but having done so in the immediate past), we detect three significant, positive effects, for expressing opinions in social networking sites or emails and, especially, for contacting online politicians. The models also feature great, positive significant effect of the lagged dependent variable which taps the change in this behaviour between waves. Among the controls, only age and education confirm its positive and significant effect.

A more homogeneous pattern arises when it comes to participation in demonstrations (table 4). Those starting to perform any kind of online political participation are more likely to take on the streets later. The effect is particularly strong for online donation, online contact and expressing one's opinions through blogging. We can't say in this case that e-participation forms relating to political representation are less connected to demonstrating, as contact and petition have a remarkable positive effect. As for the persisting effects of online forms of participation, these are only significant when it comes to online forms of political expression. Women, right-wing individuals and less educated people are less prone to take part in such actions.

Table 4: Logistic estimation of participation in demonstrations.

	(1) online petition b/se	(2) online contact b/se	(3) online donation b/se	(4) opinion email b/se	(5) opinion SNS b/se	(6) opinion blog b/se
Lagged demonstrations	1.864***	1.928***	1.930***	1.833***	1.853***	1.869***
	(.068)	(.066)	(.067)	(.067)	(.066)	(.066)
Started to perform online participation	.916***	1.024***	1.587***	.892***	.804***	.970***
	(.090)	(.124)	(.203)	(.086)	(.083)	(.095)
Stopped performing online participation	.038	-.177	.150	.278***	.202*	.178+
	(.111)	(.127)	(.215)	(.083)	(.090)	(.094)
Continued performing online participation	.905***	.939***	1.354**	1.031***	.970***	1.023***
	(.072)	(.115)	(.414)	(.076)	(.072)	(.085)
Age	-.002	-.002	-.000	-.003	-.002	-.002
	(.005)	(.005)	(.005)	(.005)	(.005)	(.005)
woman	-.196**	-.160**	-.184**	-.140*	-.149*	-.064
	(.061)	(.061)	(.060)	(.061)	(.060)	(.062)
Education	.157***	.180***	.188***	.154***	.180***	.166***
	(.036)	(.036)	(.036)	(.036)	(.035)	(.036)
Internet time	.005	.038+	.052*	.006	.006	.003
	(.022)	(.022)	(.021)	(.022)	(.022)	(.022)
Worker	-.064	-.066	-.071	-.069	-.062	-.058
	(.064)	(.064)	(.064)	(.064)	(.063)	(.063)
Left-Right scale	-.245***	-.280***	-.285***	-.270***	-.268***	-.277***
	(.018)	(.018)	(.018)	(.018)	(.018)	(.018)
2.wave	.227+	.048	.116	-.065	.144	.014
	(.125)	(.126)	(.126)	(.124)	(.127)	(.126)
3.wave	.460***	.252*	.329**	.031	.409***	.228+
	(.123)	(.123)	(.123)	(.123)	(.122)	(.123)
4.wave	.798***	.627***	.695***	.319*	.788***	.617***
	(.124)	(.122)	(.123)	(.125)	(.123)	(.123)
5.wave	.836***	.804***	.834***	.666***	.801***	.772***
	(.125)	(.125)	(.125)	(.123)	(.125)	(.124)
6.wave	.133	.114	.117	.092	.076	.117
	(.132)	(.131)	(.132)	(.129)	(.133)	(.130)
7.wave	.151	.068	.054	.128	.112	.120
	(.190)	(.193)	(.196)	(.189)	(.191)	(.189)
Pseudo R-Squared	.222	.212	.208	.221	.221	.221
N	9262	9237	9237	9312	9312	9312

Standard errors in parentheses + p<.1, * p<.05, *** p<.01, *** p<.001
Reference category for wave= 1.   Reference category for online participation: not performed online participation within the two waves under analysis.

A similar pattern is found for participation in strikes (table 5), being online donation and online contact the most beneficial online forms of activism on future involvement in strikes. Again, the pattern observed for turnout (representation related forms of e-participation relating more to institutional forms of offline engagement and vice-versa) does not seem to hold. Persistent effects are only remarkable with regard political discussion through email. As for controls, the younger, the women, right-wing individuals and workers are less prone to take part in such actions (the latter maybe pointing to a prevalence of students' strikes).

Table 5. Logistic estimation of participation in strikes.

	(1) online petition	(2) online contact	(3) online donation	(4) opinion email	(5) opinion SNS	(6) opinion blog
	b/se	b/se	b/se	b/se	b/se	b/se
Lagged strikes	1.738***	1.790***	1.800***	1.734***	1.745***	1.755***
	(.074)	(.072)	(.073)	(.072)	(.072)	(.073)
Started to perform online participation	.723***	.949***	1.349***	.727***	.665***	.758***
	(.094)	(.126)	(.203)	(.086)	(.087)	(.101)
Stopped performing online participation	.188+	-.085	.125	.291**	.174+	.186+
	(.109)	(.131)	(.218)	(.090)	(.096)	(.099)
Continued performing online participation	.754***	.825***	1.937***	.884***	.731***	.944***
	(.073)	(.110)	(.475)	(.077)	(.074)	(.083)
Age	-.017***	-.017***	-.016***	-.018***	-.017***	-.017***
	(.005)	(.005)	(.005)	(.005)	(.005)	(.005)
Woman	-.188**	-.165**	-.186**	-.148*	-.160**	-.078
	(.062)	(.061)	(.061)	(.061)	(.061)	(.063)
Education	-.014	.010	.018	-.016	.010	-.006
	(.036)	(.036)	(.036)	(.036)	(.036)	(.036)
Internet time	-.032	-.008	.006	-.034	-.029	-.038
	(.023)	(.023)	(.023)	(.023)	(.023)	(.023)
Worker	-.195**	-.189**	-.195**	-.205**	-.188**	-.188**
	(.067)	(.067)	(.067)	(.067)	(.067)	(.067)
Left-Right scale	-.199***	-.228***	-.236***	-.220***	-.220***	-.227***
	(.019)	(.018)	(.018)	(.018)	(.018)	(.018)
2.wave	.708***	.534***	.601***	.448**	.626***	.497***
	(.144)	(.144)	(.145)	(.143)	(.145)	(.145)
3.wave	.376*	.204	.274+	.021	.343*	.177
	(.148)	(.148)	(.149)	(.149)	(.147)	(.148)
4.wave	1.688***	1.538***	1.606***	1.285***	1.671***	1.521***
	(.144)	(.144)	(.145)	(.146)	(.145)	(.146)
5.wave	1.168***	1.120***	1.156***	1.001***	1.129***	1.100***
	(.142)	(.142)	(.143)	(.141)	(.143)	(.143)
6.wave	.453**	.423**	.422**	.391**	.405**	.406**
	(.152)	(.152)	(.153)	(.150)	(.152)	(.153)
7.wave	.316	.272	.298	.304	.297	.293
	(.221)	(.223)	(.225)	(.221)	(.221)	(.221)
Pseudo r-squared	.194	.190	.189	.196	.193	.197
N	9262	9237	9237	9312	9312	9312

Standard errors in parentheses + p<.1, * p<.05, *** p<.01, *** p<.001
Reference category for wave= 1.   Reference category for online participation: not performed online participation within the two waves under analysis.

Table 6 presents the results for the alternative strategy aimed at estimating the effects of within-individual changes in online behaviour on individuals' offline behaviour. Each column of the table features a model predicting each one of our dependent variables. Controls have been reduced to a minimum, as fixed effects account for any time-invariant pattern (e.g. sex). The results overall reproduce the patterns seen in tables 3 to 5. Most previous findings are confirmed: turnout is not affected by political expression through blogs, but is positively affected by all other kinds of online activity (especially petitioning) with one exception: online donation. The latter has a clear negative effect on the likelihood to turnout. The likelihood to demonstrate increases with all kinds of online engagement, particularly petition; and the same can be said about strikes, only that in this case the most beneficial experience when it comes to boost offline forms of participation is online donation.

Table 6. Panel logistic estimations of the effects of online participation on offline participation

	(1)	(2)	(3)
	turnout	**demonstrations**	**Strikes**
	b/se	b/se	b/se
Online petition	.429***	.688***	.332***
	(.090)	(.072)	(.073)
Online contact	.297+	.470***	.332**
	(.171)	(.108)	(.110)
Online donation	-.881***	.558**	.620***
	(.250)	(.174)	(.174)
Online opinion email	.112	.573***	.469***
	(.090)	(.070)	(.071)
Online opinion SSN	.171+	.356***	.303***
	(.090)	(.070)	(.071)
Online opinion blogs	.098	.255**	.363***
	(.116)	(.086)	(.088)
Internet time	-.022	.027	-.025
	(.037)	(.030)	(.030)
Worker	.616***	-.088	-.394***
	(.100)	(.080)	(.080)
Left-Right scale	.011	-.227***	-.126***
	(.026)	(.022)	(.022)
Pseudo r-squared	.027	.109	.066
N	4440	7021	6651

Standard errors in parentheses + p<.1, * p<.05, ** p<.01, *** p<.001

As for the relationship between models of democracy (representative vs. participatory) and forms of online and offline participation, these models confirm that turnout seems to be more positively affected by more "representative" e-participation forms (especially petition) than by more extra-institutional and communicational forms of e-participation. E-communication seems to play a greater role when it comes to demonstrating and striking than when it comes to vote; and donation (characterized in this research as a not very popular, extra-representative e-type of participation) is crucial for both striking and demonstrating; but so is petitioning for demonstrating, despite of being an online form of participation seeking to channel demands to political representatives. In the end, both petition and demonstration seem to be repertoires of political protest.

Figures 1 to 3 have a double purpose. First, translating the direct effects of online participation into predicted probabilities. Second, unravelling if any of the effects of offline participation travels through the four attitudes that we suggest as potential mediators: efficacy, interest, (dis)trust and satisfaction with life. The figures represent overall margins –holding nothing constant and considering actual values of the variables, not values held at their means-. These models are identical to the ones depicted in tables 3 to 5 with the addition (see orange markers) of the potential mediating attitudes.

Figure 1. Estimations of attitudes' mediationeffects on turnout. Margins.
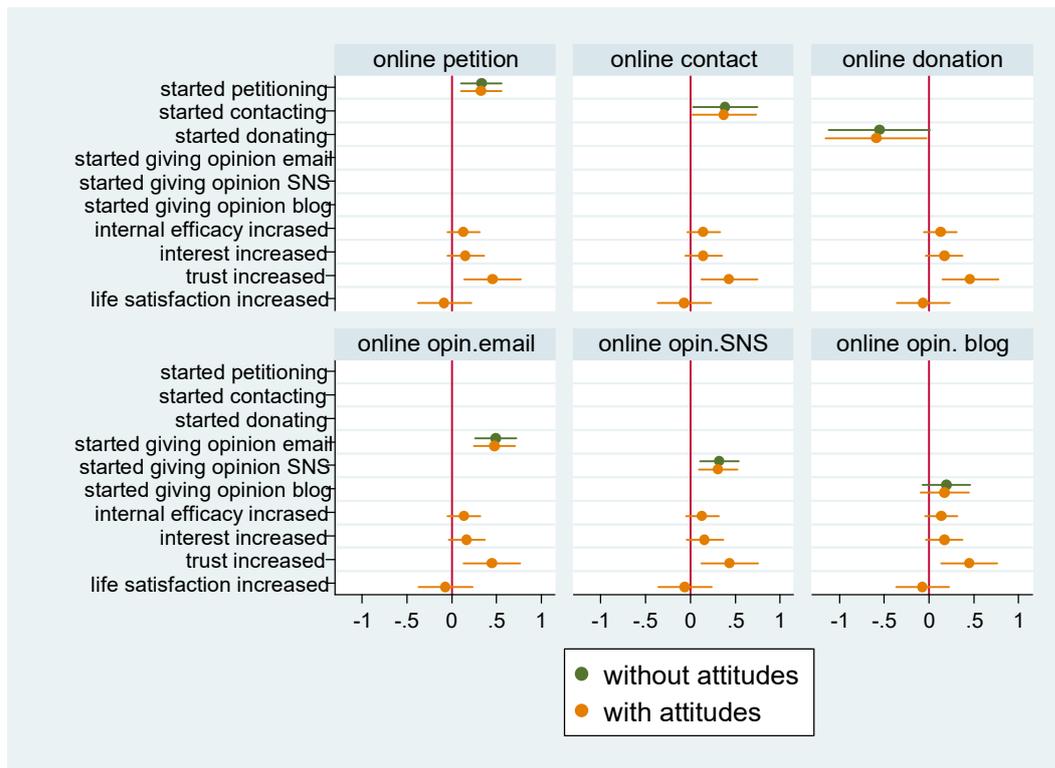
As for turnout (Figure 1), giving one's opinion through email is the variable giving a higher average increase in the likelihood to vote (6%) as compared to not having performed this activity between two waves. The inclusion of the attitudes, nevertheless, does not cause any remarkable reduction in the effects of online participation, and only one attitude emerges as a relevant explanatory factor: the increase of trust. However, this attitude seems to have an independent effect on turnout.

Figure 2. Estimations of attitudes' mediationeffects on demonstrations. Margins.
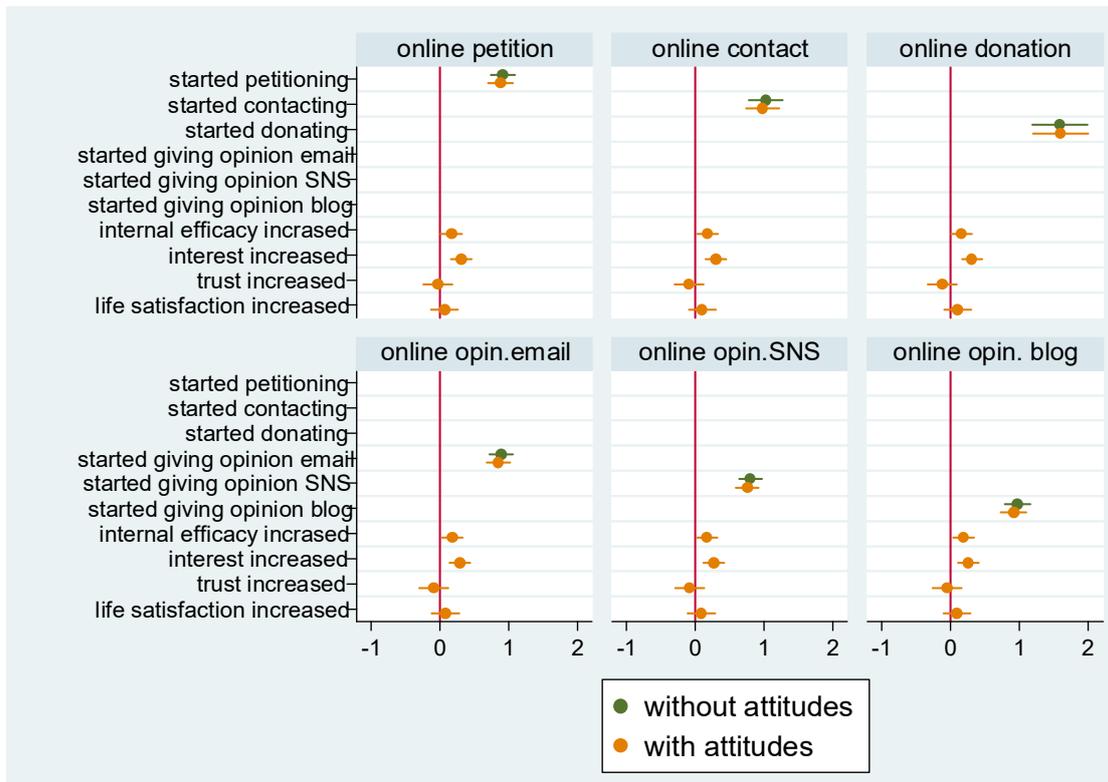
In the case of demonstrating (Figure 2), donating online increases the likelihood of taking on the streets by 28% on average, as compared to not having done so before or after. In this case, two attitudes have a remarkable effect on the dependent variable: interest and efficacy. Both boost the probabilities of performing the offline political activity, but its inclusion barely affects the observed initial effects of the online activities.

Finally, donation is also the offline form of participation with greater effects on strikes (Figure 3), as start donating increases on average the likelihood of striking by 22%, as compared to not doing so between two waves. In this case, interest, efficacy and life satisfaction have positive, significant effects on the dependent variable. But, again, their inclusion causes only very marginal modifications in the estimated effects of our main independent variables. We can conclude, thus, that these attitudes are relevant for understanding the phenomena under study, but that the effects of online participation are either direct, either mediated by other mechanisms that we haven't been able to tap in the present research.

Figure3. Estimations of attitudes' mediation effects on strikes. Margins.
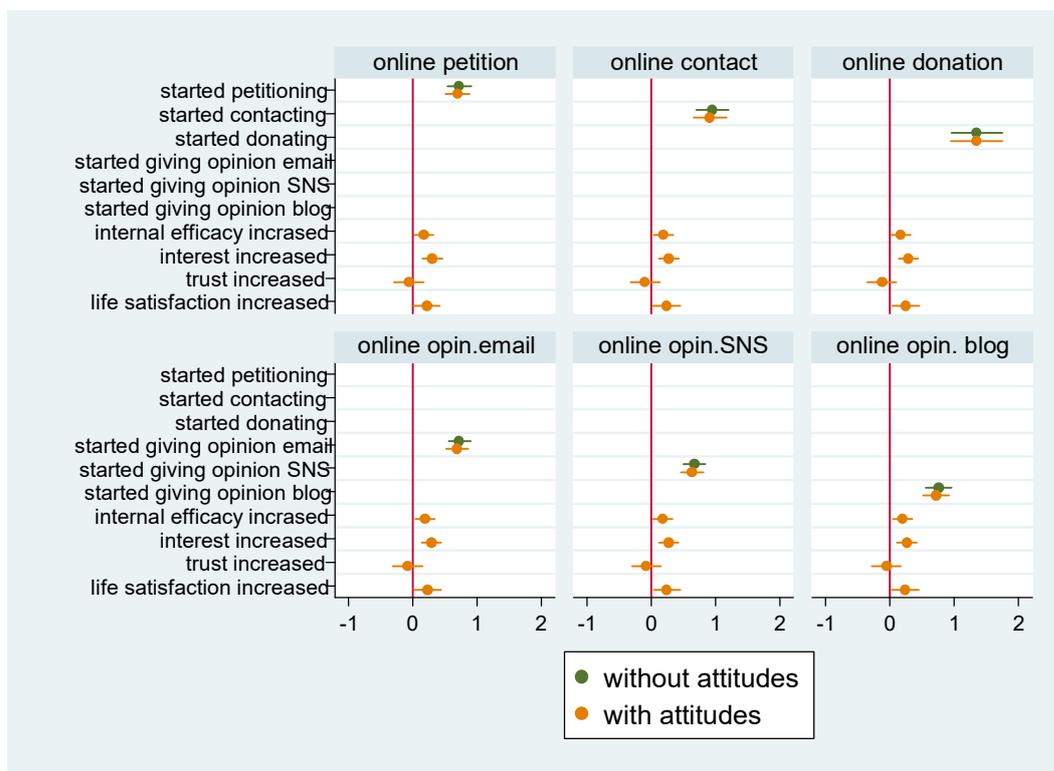
Conclusions

The effects of online political participation are currently being discussed, as the literature has not reached a consensus. We wanted to contribute to this research field with a longitudinal study of the effects of six forms of online political participation on three classic and offline forms of political engagement: turnout, demonstrating and striking. After reviewing the literature we argued that online participation should have a positive effect on such more traditional forms of political involvement. We also posit the possibility that part of this effect was indirect, travelling through four crucial political attitudes.

Our results confirm our first hypothesis. The experience of past online participation spills over to offline participation. This positive effect expands the time span covered by two panel waves (6 to 12 months) and is, in some cases (particularly when it comes to online forms of political expression), detectable two waves after the individual performed such online activities.

All modes of online participation mobilize to a similar degree. More costly and formal forms of e-participation seem to have a clear effect on offline forms of participation, including the costlier, non-institutional ones (demonstrating, striking), which is even more optimistic than the effects of e-communication on further participation documented by previous works (Cantijoch et al. 2016). Our second expectation regarding a spill-over effect only within the limits of the two basic conceptions of democracy (representative/participatory) has only limited support. Turnout indeed mainly benefits from "representative" online forms of participation (contacting, petitioning) and is alien, or even demeaned, by more citizen-centred forms of

participation (e-communication and donation). But the results are mixed for demonstrations and strikes. On the one hand, e-donation has a most remarkable effect on both offline forms of activism, and so have the different types of e-communication. Yet contacting and petitioning also have a non-dismissible effect on these more direct, extra-representative forms of offline participation.

Special attention should be given to the negative effect of donating on turnout. This is an intriguing finding giving that it is not a very popular type of online activism and that it is positively associated with demonstrating and striking. We could speculate that the recipients of such donations are not political parties, but NGO's, grassroots associations and other social campaigns, therefore putting the individual in contact with alternative forms of political participation, other than voting. Also, maybe the experience of donating is so rewarding and has such a clear and traceable impact on the final outcome (amount collected, the implementation of the goal that required the fund-raising campaign) that makes people reflect about the actual utility of voting. Yet we posit that such effects based in feeling-good experiences would have an effect on life satisfaction. This is not the case. The only attitude that has a significant effect on turnout is trust. This effect is positive and independent of the impact of online participation. Therefore, we are not yet able to explain how or why donating online depresses the likelihood of voting.

The same applies to the other types of political participation and attitudes. We identified positive and significant effects of the increase of political interest, political efficacy and life satisfaction on the likelihood of demonstrating and striking. But these effects do not cause any substantive reduction of the coefficients pointing at the impact of online participation. Hence, our last hypothesis is disconfirmed. We must accept the fact that the effect of online participation on offline participation is mostly direct, by providing a first positive experience on political involvement that predisposes the individual to participate again by other means. Alternatively, further research must examine more in deep the potential mediators for such effects, maybe opening the door to non-attitudinal mediators, such as cost reduction, social networks expansion, civic skills increased, and the like.

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