



**Social Media and Protest Mobilization: Evidence from the Tunisian Revolution**

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## Social Media and Protest Mobilization: Evidence from the Tunisian Revolution

### INTRODUCTION

Over the past two decades, the political role of the Internet and digital social media has developed into a well-established topic of research on political communication and political participation. The Internet's prominent role in the diffusion of popular protest across the Arab World and the ouster of authoritarian regimes in Tunisia and Egypt has re-energized the debate on the implications of social media networks for political mobilization and patterns of protest diffusion, as well as the impact of social media networks on individual political engagement.

Much research on these aspects of social media has hitherto been conducted in the context of consolidated Western democracies on forms of political participation that tend to support the political system. Work has been carried out on how Internet use can be used as a direct influence on actions of legitimate governments through affecting the decisions of elected officials or indirect influence through the selection of officials. Typical activities include conventional political participation (voting, donating money, canvassing, attending political meetings and electoral rallies, being interested in politics) and lawful unconventional participation (signing petitions, participating in authorized demonstrations and strikes, political consumerism).

Political science literature argues there is a plausible positive relationship between an individual's exposure to and use of digital media and the degree of his or her political engagement (Brady, Verba, and Schlozman 1995). Social network platforms such as Twitter,

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3 YouTube, and Facebook have multiplied the possibilities for retrieval and dissemination of  
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5 political information, and thus afford the Internet user a variety of supplemental and  
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7 relatively low cost access points to political information and engagement. Social media users  
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9 can be updated about their friends' political activities through their own News Feed. They  
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11 can comment on these activities or join online discussion groups, which engage them in  
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13 political conversation from the convenience of their homes at any time of the day. They can  
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15 "befriend" political organizations online and stay informed about their activities without  
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17 having to attend a meeting or a rally. In this way, the more social and interactive culture of  
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19 online communication that developed with the emergence of the Web2.0 holds potential for  
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21 the democratisation of political engagement.  
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27 Digital media use has considerably lowered the transaction costs associated with political  
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29 action; however, despite these positive attributes, its impact on individual participation rates  
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31 has remained "underwhelming" (Bimber and Copeland 2011). A meta-analysis of 38 studies  
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33 on the impact of Internet use on civic engagement between 1995 and 2005 confirms a  
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35 positive but very modest impact (Boulianne 2009), which appears to be moderated by  
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37 factors long established as standard predictors of political participation, such as social capital  
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39 (Gibson, Howard, and Ward 2000) and political interest (Xenos and Moy 2007). At the meso-  
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41 level of social organization there is broad scholarly consensus that the Internet has  
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43 expanded the 'collective action repertoire' of organizational actors, such as social  
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45 movements and grassroots organizations (Geser 2001; Doug McAdam, Sidney Tarrow, and  
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47 Charles Tilly 2001; van Laer and van Aelst 2009). The strategic toolkit of these actors has  
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49 been complemented by the informal procedures that the Internet offers for mobilization.  
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51 The structure of digital networks facilitates decentralized forms of campaigning based on  
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53 parallel activities of independent individuals. The task of information diffusion can be  
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3 delegated to a multitude of members who act as unpaid volunteers by circulating received  
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5 messages throughout their personal networks. There are significant multiplier effects as  
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7 users share information across their networks, expanding the reach and impact of  
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9 information. The Internet has thus arguably become an important resource for political  
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11 mobilization, which reduces the costs previously allocated to professional communication  
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13 (Geser 2001; Krueger 2006).  
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18 At the same time, the political implications of the Internet in the context of non-democratic  
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20 systems remain relatively under researched, even though there is a widespread popular  
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22 belief that the Internet can undermine authoritarian rule. Case study research from the  
23  
24 Berkman Centre for Internet and Society investigates the impact of information and  
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26 communication technologies (ICTs) on civic engagement in authoritarian regimes  
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28 (Chowdhury 2008; Goldstein 2007; Goldstein and Rotich 2008), as have several additional  
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30 publications on the cases of Iran (Kelly and Etling 2008; Rahimi 2003; Tezcür 2012; Weitz  
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32 2010) and China (Chen 2009). By means of a qualitative case study that analyses a  
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34 convenience sample of news reports and social media messages produced over the course  
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36 of the Egyptian uprisings (ELTANTAWY and Wiest 2011) come to the conclusion that social  
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38 media introduced a novel resource that provided swiftness in disseminating information;  
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40 and helped to build and strengthen ties among Egyptian activists.  
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47 By and large, however, the democratic transitions literature, however, is still a long way  
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49 from having established a clear understanding of the relationship between new media and  
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51 political participation and protest mobilization under authoritarian rule and the rich  
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53 empirical data – particularly micro data - needed to establish such causal influences have yet  
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55 to be gathered (Aday et al. 2010; Kalathil and Boas 2001; Lynch 1999).  
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3 The Tunisian uprising of 2010-2011 provides an excellent opportunity to address this  
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5 research lacuna. Based on background talks with 16 Tunisian digital activists and a survey  
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7 among 437 Tunisian Internet users conducted in early 2012, this article analyses the use of  
8  
9 the Internet as a significant resource for protest mobilization in the case of Tunisia. Previous  
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11 analyses of the Tunisian case show that early 'tactical concessions' (Gränzer 1999; Risse,  
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13 Ropp, and Sikkink 1999) from the regime to a growing protest movement in the 1980s halted  
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15 political reform and led to a deterioration in the human rights situation, making Tunisia a  
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17 'least likely' case where protest would be possible to make a contribution to political  
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19 transformation (Eckstein 1975; Landman 2008 ). Hence, there are good reasons to argue that  
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21 political reform in Tunisia seemed unlikely; however, this article shows that the Internet  
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23 significantly contributed to the wave of protest that brought down the Ben Ali regime.  
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25 Drawing on insights from 'resource mobilization theory' (RMT), we show that social media  
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27 (1) allowed for a 'digital elite' to break the national media blackout in Tunisia through  
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29 brokering information for mainstream media; (2) provided an element of 'emotional  
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31 mobilization' through depicting atrocities associated with the regime's handling of the  
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33 protests which, in turn, led to the formation of a national collective identity supportive of  
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35 protest; (3) enabled intergroup collaboration that facilitated a large 'cycle of protest' to  
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37 develop.  
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46 In order to sustain this argument, the paper is divided into four sections. The first section  
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48 outlines trends in social movement theory to show how Internet use and social media 'fit' in  
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50 terms of explaining the contribution of new technologies to the kind of mobilization that  
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52 took place in Tunisia in 2010 to 2011. The second section examines how a digital elite in  
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54 Tunisia used new technologies to create networks and frame the mobilization against the  
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56 regime, aggregate discontent across different opposition groups and overcome regime  
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3 attempts to control the flow of information. The third section presents statistics drawn from  
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5 the survey data to show how increased Internet use raised probabilities for Tunisians to  
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7 become involved in anti-government protest. The final section draws tentative conclusions  
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9 about the Internet and social media as a resource for protest mobilization more generally.  
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### 12 13 **RESOURCE MOBILIZATION AND NEW TECHNOLOGIES**

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16 It has been argued that public protest under authoritarianism is rare (Tullock 2005),  
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18 spontaneous, politically and geographically isolated, and will largely occur without  
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20 coordination through organized social movements (Doug McAdam, Sidney Tarrow, and  
21  
22 Charles Tilly 2001; Tilly 2004)). In explaining the breakdown of authoritarian regimes, the  
23  
24 political economy literature has consequently focused on the role of elites. It is argued that  
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26 the most serious challengers of autocrats come from their own ruling coalitions, i.e. the  
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28 military or security forces (Geddes 2003, 2006), the ruling party or coalition (Boix and Svobik  
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30 2008; Guriev and Sonin 2009; Magaloni 2008), or their royal families (Fjelde 2010; Kricheli,  
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32 Livne, and Magaloni 2011)). Where attention is given to citizen groups, it is in relation how  
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34 their support affects the interaction 'game' between elites from the government and  
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36 opposition (Colomer 2011; Colomer and Pascual 1994; Przeworski 1991). Beyond the game-  
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38 theoretic literature, however, work on social movements has shown the possibility for  
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40 popular mobilization under authoritarianism contribute to regime liberalization and  
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42 democratic transformation e.g. (Foweraker 1989, 1995; Foweraker and Craig 1990;  
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44 Foweraker and Landman 1997; Hawkins 2002; Landman 2008 ; Risse, Ropp, and Sikkink  
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46 1999).  
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55 Not only does civilian-led anti-government protest occur under authoritarianism, but it can  
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57 even spread across state boundaries through different processes of diffusion. Indeed, the  
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3 past three decades saw four cross-national waves of anti-regime mobilizations different  
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5 regions of the world: (1) popular opposition and regime change in Latin America in the 1970s  
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7 and 1980s; (2) the spread of popular challenges to communist party rule in the Soviet Union  
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9 and Eastern Europe from 1989 to 1991; (3) the 'colour' revolutions of post-communist  
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11 Europe and Eurasia from 1996 to 2005; and (4) the protests in the Middle East and North  
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13 Africa (MENA). Other cases of popular but less successful anti-authoritarian protest include  
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15 the Tiananmen Square Protests in China in 1989, the Student Revolt in Indonesia in 1998, the  
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17 Saffron Revolution in Myanmar in 2007, and the Green Movement in Iran in 2009 and 2010.  
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22 Studies that examine why social movement arise in the first place focus their attention on  
23  
24 *sources of collective grievance* and *common identities* that lead to popular mobilization and  
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26 protest (see, e.g. Acemoglu and Robinson 2005; Hendrix, Haggard et al. 2009). Studies that  
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28 examine how social movements attract participants and members to take part in their  
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30 activities focus on the role of *social movement organisations* (SMOs) and the mobilization of  
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32 important *resources* that are necessary for sustained collective actions, such as money,  
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34 communications, membership, and the provision of 'selective incentives' to overcome the  
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36 problem of collective action (see e.g. Lichbach 1998; Putnam and Fieldstein 2003). Studies  
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38 that focus on the *impact* of social movements focus on their goals, their legal and  
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40 institutional impact (including regime change), and the degree to which values and political  
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42 behaviour have been altered by prolonged periods of social movement activity.  
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50 This article explains how social movements can attract participants for collective action  
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52 against an authoritarian regime that has been challenged unsuccessfully in the past. We  
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54 show that in Tunisia, there was a latent desire to form collective movements under  
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56 conditions of grievance. Particularly, we focus the role of new technologies as a significant  
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58 resource for protest mobilization. We demonstrate that the Internet provided the means for  
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3 aggregating grievance, building networks across disparate communities within Tunisia and  
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5 communicating strategies for successful opposition to the Ben Ali regime.  
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9 While it would be incorrect to say there is no public sphere under authoritarianism  
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11 (Foweraker and Landman 1997) the ability for civil society to mobilize collective action  
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13 around grievances is made more difficult by the fact that the national narrative is often  
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15 controlled by the government which typically resorts to a mix of censorship and intimidation  
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17 to suppress negative information about its performance. By providing a space for increased  
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19 free speech, the Internet poses an existential threat to the ability of authoritarian  
20  
21 governments to control the national narrative (Kuebler 2011). Ordinary citizens, not  
22  
23 necessarily linked to any political movement, may share their grievances by voicing them  
24  
25 through online social networks, and once such information is leaked to the public it may  
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27 unleash effects at two different levels. At the micro level, it can act as a cognitive catalyst  
28  
29 that pushes people into protest action. At the macro level, media content that evokes  
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31 negative emotions has a high potential to “go viral”, where anger and anxiety as emotional  
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33 states of heightened physiological arousal are key in driving social transmission and diffusion  
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35 (Berger and Milkman 2010).  
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43 The limited supply of information under authoritarian conditions means that individuals can  
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45 expect to pay high personal costs (arrest, incarceration, or death on streets) if they  
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47 participate in unsuccessful protest activity that results from the lack of coordination and  
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49 sharing of information. The key challenge for the formation of protest under authoritarian  
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51 regimes is that potential protesters will only turn out to protest if they are convinced that a  
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53 large number of others will do the same (Hendrix, Haggard, and Magaloni 2009). Social  
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55 networks provide individuals with information that allows for a better calculation of their  
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57 ‘individual risk threshold’ (Granovetter 1978) in two important ways. First, online content  
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3 that documents past protest events may trigger informational cascades that lead to mass  
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5 civil uprisings. Second, event management features (e.g. "Facebook events") offered by  
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7 social networking sites inform users about the prospective participation in upcoming events.  
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12 The potential of new technologies to enhance the ability of ordinary people to share  
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14 information of consequence should be understood in terms of Resource Mobilization Theory  
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16 (RMT). RMT claims that open and affluent societies provide more favourable conditions for  
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18 contentious groups to thrive, thus making protest more common (Dalton and van Sickle  
19  
20 2005). Here, the existence of extensive non-governmental organizations and other civil  
21  
22 society groups provide the crucial variable linking dissatisfaction to political action, as they  
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24 allow citizens to engage in a variety of voluntary associations freely and to develop the  
25  
26 necessary social and organizational skills to promote their interests (Putnam 2000; Putnam  
27  
28 and Feldstein 2003). Such groups are able to raise funds, increase membership, and engage  
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30 in communication and awareness-raising strategies to bring about their goals. During times  
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32 of political stress, such groups of disparate social movement organizations can come  
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34 together in larger 'cycles of protest' to challenge the regime on significant policy issues  
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36 (Doug McAdam, Sidney Tarrow, and C. Tilly 2001; Tarrow 1994). In accounts of social  
37  
38 movements in more open societies, studies that adopt the RMT framework focus on how  
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40 elites in the opposition work through networks and social movement organisations (SMOs)  
41  
42 to harness a collection of resources that help aggregate grievances and take advantage of  
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44 the changing political opportunity structures that can emerge during a cycle of protest (e.g. a  
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46 shift in elite alignments, critical elections, exogenous economic shocks, etc.).  
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3 While the occurrence of protest in closed authoritarian societies may appear to run counter  
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5 to the basic premises of RMT, many authoritarian societies have the presence of latent  
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7 networks, proto-organisations and community leaders (or at least those that have not been  
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9 arrested, exiled or 'disappeared'), all of which can provide the basis for social mobilisation.

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12 The advent of the Internet builds on ever denser communication infrastructures as societies  
13  
14 develop and provides a resource for movement leaders that can be used to orchestrate  
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16 protest where institutional distrust looms large and civic activism is systematically  
17  
18 suppressed. Internet use can coincide with participatory dynamics characterized less by  
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20 formal organizational relationships and more by loosely-knit personal networks increasingly  
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22 mediated through electronic communication (Wellman et al. 2003). The availability of  
23  
24 Internet communication technologies can enable activist groups to communicate with  
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26 potential constituencies across large distances, including diaspora communities living  
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28 outside the country in question. Thus, they constitute important resources to achieve  
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30 intergroup-collaboration and challenge the strategies of social isolation typically employed  
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32 by authoritarian regimes to obstruct civil society groups from forming and operating..

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40 In addition to the idea of the Internet as a resource, the emergence of new technologies can  
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42 also be seen as way in which potential protesters are targeted by 'recruitment agents' who  
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44 inform them of upcoming protest events and encourage their participation (see Snow,  
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46 Zurcher, et al. 1980). The most infuriated and risk-acceptant citizen will not be able to  
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48 participate in an anti-government demonstration if he or she does not know a  
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50 demonstration event is actually taking place. The likelihood of a person to become mobilized  
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52 increases with their network 'embeddedness' and movement leaders can use such  
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54 embeddness to help recruit larger numbers of participants. Overlapping memberships allow  
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3 information about upcoming protest events to travel beyond the boundaries of a network of  
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5 hard-core activists and 'spill over' to networks of less-engaged citizens (Carroll and Ratner  
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7 1996). Another important function of social networks in this context is to build a collective  
8  
9 identity supportive of protest action, which is achieved through interpersonal conversations  
10  
11 with other network members. Collective identities motivate protest participation by  
12  
13 providing the potential participant with a sense of in-group solidarity and an oppositional  
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15 consciousness of "us" versus "them" (Friedman and McAdam 1992; van Laer 2011).  
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20 It can thus be assumed that the Internet is conducive to increased awareness about  
21  
22 collective action events, such as mass demonstrations of the kind observed during the Arab  
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24 Spring. The more embedded an individual Internet user is in terms of memberships in  
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26 different online social networks, the higher should be the likelihood of him or her being  
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28 targeted by an online mobilization attempt, which as we shall see, was increasingly  
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30 coordinated by a digital elite that could collate, translate, and communicate disparate nodes  
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32 of grievance in the country in ways that galvanised a more national focussed critique of the  
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34 Ben Ali regime.  
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43 Taken together, this article is concerned with how interaction between aggrieved individuals  
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45 was enhanced through new technologies, and how new technologies contributed to the  
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47 wave of protest mobilization in Tunisia. We argue that aggrieved individuals under  
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49 authoritarian regimes face additional challenges that for successful mobilization, and that  
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51 the Internet and social media provide a resource to meet some of these challenges. In a  
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53 country like Tunisia with an authoritarian regime, disparate communities with varied  
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55 dialects, and a lack of shared information, the Internet provided access to information,  
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3 lowered transaction costs, buttressed networks of activists and contributed to anti-  
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5 government mobilization particularly after the self-immolation of Mohamed Bouazizi on 17  
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7 December 2011.  
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12 In order to examine the contribution of new technologies to protest mobilization in Tunisia,  
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14 we use three main empirical sources: (1) the relevant secondary literature, (2) a series of  
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16 background talks conducted with 16 cyber activists and citizen journalists during a field trip  
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18 to Tunis in October 2011, and (3) data from an online survey among Tunisian Facebook users  
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20 conducted between 1 March and 31 May 2012. For the background talks, the activists were  
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22 asked to provide information about their own online and offline protest activities prior to  
23  
24 and during the uprising, to describe the nature of digital activist networks in Tunisia and  
25  
26 their own position in these structures, to provide a personal assessment of the contribution  
27  
28 of ICT to the protest movement, and to help identify online contents which they regarded as  
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30 having been particularly influential.<sup>1</sup> For the survey data we used the online software  
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32 SurveyMonkey, where the survey contained a total of 34 questions and took about 12  
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34 minutes to complete. It was conducted in Arabic and was pilot-tested for  
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36 comprehensiveness and ease of use among native Tunisian-Arabic speakers prior to its  
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38 launch.  
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49 <sup>1</sup> . Interview partners included independent bloggers, bloggers for digital formats of traditional media outlets,  
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51 and activists belonging to diverse networks such as the collective Blog *Nawaat*, the self-described “cyber think  
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53 tank” *Takriz* - which maintains close ties to the *Anonymous* cyber movement and radical ultra groups of  
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55 Tunisia’s football fan-scene, as well as members of the Tunisian Pirate Party, which at that time had not yet  
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57 been officially recognized as political party. Political activism in times of regime transformation comes with  
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59 uncertainties for those who engage in it. This is especially true where activists have been socialized in the  
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political culture of a recently toppled authoritarian regime with the outcome of the transition process  
remaining unclear. Such was the situation during the field trip for this study, which was undertaken in the week  
leading up to Tunisia’s first democratic election following the ouster of President Ben Ali. Taking into account  
the diverging risk perceptions of interview partners, the information given by them was therefore subsumed  
into the narrative of the case study, unless they explicitly agreed to their identity being revealed.

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3 Participation in the survey was promoted using a respondent-driven sampling technique.<sup>2</sup> To  
4  
5 build the sample, we formed an online group on Facebook dedicated to the discussion of the  
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7 role of the social media in the Arab Spring and invited those cyber activists to join the group  
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9 to which contacts had been established during the field. The group was then systematically  
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11 enlarged using *the Facebook friendship suggestion algorithm* whereby the network  
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13 recommends new friends to its users on the basis of their existing friends. Once the survey  
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15 had been launched, an invitation to participate was sent to members of this group using the  
16  
17 *Facebook group event organizing function*. The invitation message contained the survey's  
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19 URL, a description of its academic purpose, and suggested to circulate the survey URL among  
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21 friends, relatives and colleagues. No monetary or material incentive was offered to the  
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23 respondents. The survey resulted in 437 responses; a non-random sample which provides  
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25 valuable insights into a subset of Tunisian citizens previously shown to have been well  
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27 educated, digitally literate, and socially interconnected (see Annex 1).  
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52 <sup>2</sup> The method applied here is similar to the chain-referral sampling methods which have hitherto primarily been  
53 used to contact hidden or difficult-to-reach populations such as drug users or sex workers (Salganik and  
54 Heckathorn 2004) While the "pass-along effect" (Norman and Russell 2006) involved with this technique is  
55 helpful in increasing sample size and reducing the transaction cost of response collection, it is often criticized  
56 because respondents are not randomly selected from a known sample frame and this limitation risks biasing  
57 the sample and diminishing the generalizability of inferential statistical tests. While acknowledging that these  
58 threats are real, as the online population has grown and the Internet has become more embedded in everyday  
59 life, it has become increasingly common for social scientific inquiries to proceed with samples derived through  
60 this process (Kaye and Johnson 1999).

## DIGITAL ELITE AND THE AGGREGATION OF DISCONTENT

During the 1990s, governments in the Muslim world adopted strategies to regulate the use of ICTs that varied across regime type. In liberal regimes competition in the ICT-market was permitted, while in more autocratic regimes ICT development was controlled by state owned companies, which reported directly to the government and monitored online content (Howard 2011). Tunisia was somewhere in the middle of this spectrum. Starting from the middle of the 1990s, President Ben Ali's administration invested heavily in the telecom sector. Within a decade, Tunisia had one of the most developed telecommunications infrastructures in Northern Africa. Competition between eleven Internet service providers led to one of the most developed Internet markets in the region (Reporters Without Borders 2004). By 2008 there were 1.7 million internet users out of a total population of 10.2 million, who could access the Internet from their homes and / or work, as well as from public Internet centres (*publinets*) set up throughout the country. Ben Ali's strategy to depict himself as a role model for the promotion of ICTs in the developing world sold well internationally when in 2001, Tunisia was chosen to host the second stage of the UN-World Summit on the Information Society in 2005.

### *Government censorship activities*

Despite its positive international image, the Ben Ali regime went at great lengths to control and censor communication on the Web. Under the pretext of preventing access to material contrary to public order and morality, the Tunisian Internet Agency (ATI), was legally authorized to intercept email messages. Since the ATI was the gateway from which all of Tunisia's Internet Service Providers (ISPs) leased their bandwidth the agency was also able to monitoring software onto their servers (OpenNet Initiative 2009). While the ATI tried to

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3 conceal its censorship activities, the somewhat clumsy practice of generating fake 404 “File  
4 not found” error messages for blocked websites soon gained the agency the nickname  
5 “Ammar 404”<sup>1</sup>. In addition, the ATI exercised control by obliging private Internet café  
6 owners and the *publinets* to register the ID numbers of Internet users and by holding them  
7 legally responsible for their customers’ online activities.  
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17 Online censorship was stepped up considerably in 2008 in response to strikes and  
18 demonstrations against corruption of the Phosphate Mining Company (*Compagnie*  
19 *Phosphate de Gafsa*) in the region of Gafsa. While state-controlled media ignored the  
20 events, Internet activists began to cover them on Facebook. In August 2008 Facebook was  
21 blocked at the request of Ben Ali who cited national security violations by terrorists  
22 (Chomiak 2011; International Crisis Group 2011), but after considerable online protest the  
23 government lifted the blockade a few weeks later and switched to a strategy of covert  
24 surveillance of the social network. According to The U.S. State Department and the  
25 Committee to Protect Journalists (CPJ), the government ordered Tunisian ISPs to intercept  
26 the log-in details of Tunisian Facebook users and relay them to the ATI which then used  
27 them to either block the accounts entirely or remove undesired content (Lister 2011).  
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#### 45 *Cyber-activism 1998 – 2010*

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47 Cyber activism in Tunisia is a phenomenon that long predates the Arab Spring. As early as  
48 1998, two anonymous activists named “Foetus” and “Waterman” founded the group *Takriz*<sup>2</sup>,  
49 described as a “cyber think and street resistance network”. From its beginnings, the group  
50 clearly targeted the country’s politically alienated youth as its core audience through a  
51 combination of aggressive street slang and irreverent mockery of the authorities, which soon  
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3 caught the regime's attention. Takriz's website was blocked within Tunisia in August 2000,  
4  
5 but soon other sites sprang up to take its place. The collective blog *Nawaat*<sup>3</sup>, co-founded in  
6  
7 2004 by the exiled activists Riadh Guerfali and Sami Ben Gharbia, sought to provide a public  
8  
9 platform for Tunisian dissident voices and publish information about the regime's corruption  
10  
11 and human rights violations.  
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13

14  
15 Other digital activists started out with cultural or entertainment topics and became  
16  
17 politicized along the way in reaction to the regime's increasing repressiveness. Lina Ben  
18  
19 Mhenni, a lecturer in linguistics at the University of Tunis, started out reporting on the  
20  
21 capital's club scene on her blog *Nightclubbeuse*, but from 2009 increasingly reported on  
22  
23 social and political issues which led the authorities to block her site in early 2010. The re-  
24  
25 launched version of her blog *A Tunisian Girl* adopted a decidedly political tone that won her  
26  
27 several journalism awards as well as a Nobel Peace Prize nomination in 2011 for the  
28  
29 courageous documentation of the regime's human rights violations.  
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35 These examples show that a political culture of dissent existed prior to the events of  
36  
37 December 2010. The Internet provided an alternative public sphere that was at least  
38  
39 partially shielded from the government's unilateral oversight and control. Tunisians were  
40  
41 able to form solidarities through shared feelings of repression and humiliation and to  
42  
43 formulate a collective alternative discourse (Chomiak 2011; International Crisis Group 2011).  
44  
45

46  
47 Tunisia's cyber avant-garde, however, was dominated by affluent, well educated, and  
48  
49 polyglot individuals with a high degree of cultural capital (Lim 2013) - a social profile  
50  
51 characteristic for early ICT adopters throughout the developing world (Norris 2001). Yet it  
52  
53 would be inaccurate to dismiss their network as a socially exclusive club. The early opening  
54  
55 of the telecom market to free competition had considerably reduced the cost of Internet  
56  
57 access, such that Internet use was not the privilege only of the economic elite (Howard  
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3 2011). However, the ability for bloggers to convey their political messages to a critical mass  
4  
5 of citizens was thwarted by tight control from the Ben Ali regime. According to Kuebler  
6  
7 (2011), this limited impact of blogging between the late 1990s and 2010 can be attributed to  
8  
9 its failure to build “the bridge from an elitist medium to the general public sphere”. As  
10  
11 illustrated in Table 3, prior to the Revolution traffic on the websites of Tunisian blogger  
12  
13 communities such as *Nawaat* originated mainly from the host countries of sizeable Tunisian  
14  
15 diaspora communities.  
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20 [Table 1 about here]  
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23  
24 Digital activists had thus stepped-up their efforts to connect with both international and  
25  
26 domestic constituencies. Several core activists started to become active in international  
27  
28 blogger communities, such as Global Voices,<sup>4</sup> to increase their visibility abroad. Some  
29  
30 received training in e-journalism from programs funded through the US Middle East  
31  
32 Partnership Initiative (MEPI), which focused on training journalists throughout North Africa  
33  
34 and the Middle East in the years leading up to 2010.<sup>5</sup>  
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#### 40 *Protest ‘Ignited’: 17 December – late December 2010*

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42 The event that finally undid the ability of Ben Ali’s security apparatus to control the public  
43  
44 sphere occurred in the marginalized provincial town of Sidi Bouzid southwest of Tunis. On 17  
45  
46 December 2011, distress triggered by socioeconomic, generational and geographic  
47  
48 disparities within Tunisia’s many governates was epitomized by the self-immolation of  
49  
50 Mohammed Bouazizi. The 26 year-old fruit seller set himself on fire after a female police  
51  
52 officer had confiscated his wares because he did not have a vendor’s permit and publicly  
53  
54 humiliated him by slapping him in the face. By committing his desperate act in front of the  
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56 office of the regional governor, Bouazizi forced the regime to assume political and moral  
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3 responsibility for his situation, thus turning him into the symbolic representative of millions  
4  
5 of young Tunisians who lacked the opportunity for socio-economic advancement (Aday et al.  
6  
7 2010; Lynch 2012). The same day, members of Bouazizi's family, accompanied by trade  
8  
9 unionists, marched to the police headquarters to express their anger. The protests soon  
10  
11 turned into violent clashes between the police forces and members of Bouazizi's extended  
12  
13 family, neighbors and youth who identified with his plight. Within a week, the protests  
14  
15 spilled over to several neighboring cities. However, unlike in Gafsa two years earlier, the  
16  
17 regime failed to contain the uprising and limit its ability to spread beyond the region. By the  
18  
19 time Bouazizi died in hospital from his injuries on 4 January, what had begun as a local,  
20  
21 socio-economically, motivated protest had turned into a nationwide anti-regime movement  
22  
23 with tens of thousands of Tunisians from all levels of society demanding Ben Ali's fall.  
24  
25 Bouazizi's death provided the necessary collective frame of reference to propel the online  
26  
27 anti-regime movement onto the Tunisian street. But how did this information manage to  
28  
29 break the filter of state-controlled media to reach such a broad audience so quickly?  
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38 One answer lies in the way that the online networks that had developed previously  
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40 interacted with traditional international media outlets. Previous analyses of the Internet's  
41  
42 role in the context of the Egyptian revolution (e.g. Aouragh and Alexander 2011) warn  
43  
44 against interpretations that isolate the Internet from other with which they formed powerful  
45  
46 synergies. The same holds true for the case of Tunisia: The initial protests in Sidi Bouzid were  
47  
48 recorded by participants with cell phone video cameras and posted on personal Facebook  
49  
50 profiles. On the eve of the revolution, Facebook penetration still hovered around a modest  
51  
52 17% (Dubai School of Government 2011). It is unlikely that this information would have  
53  
54 reached a mass audience had it not been for a small elite of digital activists, many of them  
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3 operating from exile, who acted as information brokers. Around the globe, these activists  
4  
5 now joined efforts to screen Facebook for protest related posts, translating the material,<sup>6</sup>  
6  
7 and structuring it into a coherent narrative, as Yassine Ayari explains:  
8  
9

10 When the revolution came I was in Belgium. At that time I was already  
11  
12 known through my blog. I had 2000 or 3000 friends on Facebook which  
13  
14 gave me a little bit of influence. So I took a vacation from my job and sat  
15  
16 with three other friends, PCs, pizzas, and a telephone. We tried to use all  
17  
18 the information we could handle: status updates, pictures, videos. When  
19  
20 we heard that something happened in Kasserine or somewhere else, we'd  
21  
22 pick up the phone, we'd know someone who knows someone and we  
23  
24 would find the information and post it (Yassine Ayari)<sup>7</sup>  
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31 Networks like *Global Voices* and *Nawaat* started to run special online features covering the  
32  
33 protests and spread the word through their own social media channels on Facebook,  
34  
35 Twitter, and YouTube. Once the information had been made available in a publishable form,  
36  
37 international broadcasters were able to pick it up and re-import it into the country, thus  
38  
39 'leapfrogging' the blackout imposed by Tunisian state-media gatekeepers. Social media  
40  
41 footage about the Sidi Bouzid protests first appeared on Al Jazeera on 20th December 2010.<sup>8</sup>  
42  
43 It was only through this complex threefold interaction between non-elite protesters,  
44  
45 strategically oriented digital activists, and international broadcasters that the information  
46  
47 about the death of Bouazizi and the ensuing protests were able to reach a larger portion of  
48  
49 the Tunisian society.  
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3 *Protest escalation and regime collapse: late December 2010 – 14 January 2011*  
4

5 Over the second week of the conflict, the movement expanded both socially and politically.  
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7 Unemployed youth, who had so far been the socially dominant group among the protesters,  
8  
9 were joined by employed professional and occupational group. The National Bar Association  
10  
11 and the regional branches of the UGTT (Union Générale Tunisienne du Travail) emerged as  
12  
13 poles of contestation, giving the movement both structure and sustainability (International  
14  
15 Crisis Group 2011; Lynch 2012; Saidani 2012 ). Politically, the movement radicalized with  
16  
17 socio-economic demands rapidly transforming into overt challenges to the regime, most  
18  
19 clearly expressed by the slogan *Ben Ali dégage!*<sup>9</sup>  
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26 The regime responded with increased repression on the one hand, and an almost complete  
27  
28 breakdown in public communication on the other hand. Between the 8th and 10th of  
29  
30 January, police violence resulted in the deaths of 50 protesters according to union and  
31  
32 hospital sources (International Crisis Group 2011). Ben Ali had only addressed the nation in a  
33  
34 first televised speech on 28<sup>th</sup> December, promising to respond to the protesters' demands.  
35  
36 Thereafter, almost two weeks elapsed before in a second speech on 10<sup>th</sup> January he  
37  
38 promised to create 300.000 jobs over the next two years, but at the same time condemned  
39  
40 the protests as "terrorist acts" orchestrated by foreign interests. These delayed and  
41  
42 disconnected reactions from the regime stood in harsh contrast to a reality that had become  
43  
44 visible for all to see through social media, and significantly contributed to transforming a  
45  
46 spontaneous and locally-rooted movement into a determined national revolution.  
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55 Towards the end of December 2010, web activists from the capital had begun to travel to  
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57 the remote regions of the country to cover the events and transmit them through Facebook  
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3 real- time videos. Although Al-Jazeera had only one correspondent based in country and its  
4  
5 Tunis office had been shut down (Lynch 2012), the TV channel could now draw on a wealth  
6  
7 of footage circulating on the web which it broadcasted into Tunisian households without an  
8  
9 Internet connection. One video with particular impact was recorded by a medical student at  
10  
11 the emergency ward of the Kasserine municipal hospital<sup>10</sup>  
12  
13

14 You could see people had been killed, their heads blown up [...] Videos  
15  
16 like this are shocking, but that's what good about them. Because many  
17  
18 Tunisians did not have a problem with Ben Ali. They said: "we're ok,  
19  
20 we are not poor we have food, we have hotels, we have beaches... it's  
21  
22 ok. Where is the problem!?" But when you show them stuff like this  
23  
24 they radically change their point of view about the system (Haythem El  
25  
26  
27  
28 Mekki).<sup>11</sup>  
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33 During the final days of the uprising, an important function of the Internet consisted in  
34  
35 helping to overcome the collective action problem associated with protest under  
36  
37 authoritarian regimes. Reports about large scale demonstrations helped many Tunisians to  
38  
39 overcome the barrier of fear that had so far prevented them from taking offline action. On  
40  
41 12<sup>th</sup> January the UGTT called for a rally in Sfax. With about 30,000 people in the streets, the  
42  
43 city witnessed the largest demonstration prior to the fall of Ben Ali and is considered the  
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45 revolution's point of no return:  
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52 Everyone who saw the video about the demonstration in Sfax said: if  
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54 this has happened in Sfax then it can happen in Tunis. And if it happens  
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56 in Tunis then it will be a success (Sara Ben Hamadi)<sup>12</sup>.  
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5 On 13 January, Ben Ali delivered his last televised speech, in which he announced that he  
6  
7 would abstain from running as a presidential candidate in 2014 and offered to call for early  
8  
9 parliamentary elections. It was too little too late. According to Schraeder and Redissi (2011),  
10  
11 especially students and young people under 30 felt reluctant to grant the regime another  
12  
13 four years to craft an authoritarian transition. Many of them saw the mass demonstrations  
14  
15 staged for 14<sup>th</sup> January in the centre of Tunis as a unique opportunity of their generation to  
16  
17 break with a tradition of quiescent obedience and considered participation in these protests  
18  
19 as a patriotic duty. It also appears that social media were a crucial element in the  
20  
21 politicization and mobilization of the young urban middle class and elites. As Nadia Zouari, a  
22  
23 Tunis based plastic artist and feuilletonist for *Le Temps*, remembers the final days leading up  
24  
25 to the regime's fall<sup>13</sup>:  
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30  
31 During this period we spent white nights in front of the computer.  
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33 Facebook connected us to the things that were going on and it felt like  
34  
35 we were living in a different country. Because in Tunis you could lead a  
36  
37 normal life. But in Sidi Bouzid, Kasserine and Kef it was totally  
38  
39 different. And when we saw what was happening to people there we  
40  
41 decided that we had to show solidarity with them.  
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48 Religious political actors seem to share this interpretation of the Internet's role in mobilizing  
49  
50 urban middle classes. In an interview by the International Crisis Group (2011) a member of  
51  
52 the moderate Islamist Ennahda party states: "*The internet caused the failure, to all of our*  
53  
54 *surprise, of the regime's project of creating a consumerist and apolitical middle class*". It  
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56 appears then, that another important role of Facebook and other social media was to span a  
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3 bridge between hitherto unrelated socio-economic groups, thus providing the basis for  
4  
5 intergroup collaboration that facilitated a large cycle of protest to develop. On 14th January,  
6  
7 confronted with the largest anti-government demonstration that Tunis had ever seen, Ben  
8  
9 Ali and his family fled the country on a plane to Dubai.  
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### 13 14 15 **THE INTERNET AND MOBILISATION: SURVEY EVIDENCE** 16

17  
18 These developments in the provision, restriction and use of the ICTs in Tunisia, as well as the  
19  
20 strong anecdotal evidence from our interviews suggest that the internet and social media  
21  
22 contributed to the downfall of the Ben Ali Regime. In this final empirical section, we analyse  
23  
24 the results of our online survey to show that indeed respondents who were more active  
25  
26 internet users were significantly more likely to engage in anti-government protest activity.  
27  
28 Our analysis proceeds by looking at the frequency of responses across questions in the  
29  
30 survey that capture internet uses, attitudes towards the Ben Ali regime and the likelihood to  
31  
32 become involved in anti-government protest activity. We then show how we constructed a  
33  
34 scale of internet use and a scale of likelihood to engage in political protest activity. With  
35  
36 these two scales, we engage in a simple bivariate analysis and then move on to an ordered-  
37  
38 probit multiple regression analysis to examine the importance of Internet use for protest  
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40 mobilization in the presence of additional explanatory variables.  
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48 Table 2 provides the descriptive statistics for the variables of interest. The survey reveals a  
49  
50 complex mix of attitudes to the Ben Ali regime itself and offers different measures of  
51  
52 attitudes that variously map onto the main theoretical concepts outlined above. There are  
53  
54 several questions on government capacity to run the country, where two dimensions of  
55  
56 attitudes relating to managing the economy and protecting rights and freedoms emerged.  
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3 For managing the economy, we collapsed four questions on the economy, jobs, income  
4 distribution and corruption into a scale, where the frequency of the respondents in our  
5 sample with strong opposition to the regime is high (i.e. they strongly disagreed across all  
6 four questions relating to government capacity in that issue area). For rights and freedoms,  
7 we collapsed three questions relating to freedom of speech, freedom of the press and  
8 general respect for people's rights under the Ben Ali, where the frequency of opposition  
9 again is very high. We see high response rates and good variation across all the components  
10 of the two composite scores. Figure 1 shows both scales of opposition among the  
11 respondents, where higher scores on the scale show greater levels of discontent.  
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**Figure 1 about here**

28 In addition to these general levels of opposition to the regime, 59.5% of the sample  
29 expressed anger, sadness and frustration over online pictures and videos that documented  
30 the regime's heavy handed response to opposition activities and made them doubt the  
31 legitimacy of the regime itself. These attitudes were joined with a general level of national  
32 pride in opposing the regime, where 93.5% agreed strongly or agreed that as Tunisians they  
33 needed to support the protest movement and 96.1% agreed strongly or agreed that the  
34 events filled them with a sense of pride about being Tunisian<sup>3</sup>. These findings emphasize the  
35 Internet's role as a transmitter of emotions that contribute to the formation of collective  
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48 <sup>3</sup> In an open ended survey on social media use conducted among 50 Tunisians Esseghaier (2013)  
49 observed similar motifs with respondents reporting a sense of unity, solidarity, pride, and  
50 connection. The respondents discussed a sense of unity, solidarity, pride, and connection, fostered  
51 through the physical demonstrations. - See more at: [http://wi.mobilities.ca/tweeting-out-a-tyrant-  
52 social-media-and-the-tunisian-revolution/#sthash.nXQaMhxS.dpuf](http://wi.mobilities.ca/tweeting-out-a-tyrant-social-media-and-the-tunisian-revolution/#sthash.nXQaMhxS.dpuf)  
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3 identities supportive of protest action – a function that has long been regarded as essential  
4  
5 by attitudinal and network approaches to political activism (Friedman and McAdam 1992;  
6  
7 Jasper and Poulsen 1995, van Laer 2011).  
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14 In terms of intergroup collaboration it is interesting that 73% of respondents reported that in  
15  
16 order to keep informed about what was happening, they started to connect with people on  
17  
18 social networks that they had not previously known. 73.8% of respondents had learned  
19  
20 through the Internet that a large number of people had signed up for a demonstration in  
21  
22 their own town, city or municipality. Combined, these two findings indicate that social media  
23  
24 may indeed have facilitated a spillover effect whereby protest information filters from the  
25  
26 networks of political activists into those of less-engaged citizens (Carroll and Ratner 1996) .  
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31 In rationalist terms it is interesting that 80.4% of the sample 'agreed strongly' or 'agreed' to  
32  
33 the statement that based on what they saw on the Internet they came to believe that the  
34  
35 protest movement would achieve its goal of bringing down the Ben Ali government. 82.2%  
36  
37 agreed strongly or agreed that from what they were able to see on the Internet, the number  
38  
39 of people involved in the protests outnumbered those who supported the regime. At the  
40  
41 same time the majority of respondents were conscious of the risks involved with protest  
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43 action: 81.9% felt that their participation in protests could result in injury, arrest or other  
44  
45 forms of repression. While this could have resulted in a lack of incentive to personally  
46  
47 participate in protest action, the results also indicate that the free rider effect may have  
48  
49 been outweighed by feelings of personal efficacy and in-group solidarity as 53.6% felt that  
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51 they could make a positive and 92% agreed strongly or agreed that they had a lot in common  
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53 with those involved in the protests.  
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3 Network embeddedness among respondents was high with 65.1% of the sample indicating to  
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5 have more 200 friends in their primary online social network. Membership in popular social  
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7 network sites varied across Facebook (98.4%), YouTube (46.4%), Twitter (42.7%), LinkedIn  
8  
9 (23.0%), Dailymotion (13.7%), Flickr (7.4%) and Vimeo (7.1%).<sup>14</sup> But did the use of the  
10  
11 internet and participation in social media contribute to mobilization for protest?  
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14  
15 To address this fundamental question, we combined several related questions into two  
16  
17 scales. First, we combined seven questions on the frequency of use of the Internet for  
18  
19 protest-related activities, which include questions relating to online discussion of the  
20  
21 political situation with known and unknown people, online searches for information on local  
22  
23 and national protest events, and the use of the Internet to share information within Tunisia  
24  
25 as well as to international audiences<sup>15</sup>. Second we combined four questions on offline  
26  
27 political behavior during the revolution, including such activities as participating in  
28  
29 demonstrations; leafleting, wearing clothing, buttons or stickers with political messages; or  
30  
31 discussing politics face to face. Figure 2 shows both scales, where it is clear that there is a  
32  
33 cumulative frequency for respondents who used the internet for protest-related activity,  
34  
35 while their cumulative frequency of political activity tends toward the lower end of the scale.  
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Despite the difference in engagement between on-line and off-line activities, our analysis  
shows that there is a significant relationship between internet activity and the participation  
in protest activity.

**Figure 2 about here**

As a first look at the relationship between internet use and protest activity, we present a  
cross-tabulation based on dichotomizing both scales and comparing frequency counts for  
low and high internet use against low and high protest activity. The cross-tabulation (Figure

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2  
3 3) shows that respondents with low internet use were less engaged in protest activity than  
4  
5 those respondents with high internet use (compare the shaded areas), where the difference  
6  
7 in percentages is statistically significant ( $\chi^2 = 17.767$ ;  $p < .001$ ). Such bivariate results,  
8  
9 however, need to take into account additional explanatory variables to check the degree to  
10  
11 which internet use is indeed related to protest activity.  
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17 **Figure 3 about here**  
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21 To this end, we tested a series of increasingly complex models using ordered-probit multiple  
22  
23 regression, which is the best statistical estimator given the ordinal scale that we created for  
24  
25 political protest activity.<sup>16</sup> Our dependent variable is the scale for level of protest activity and  
26  
27 our independent variables variously include the level of internet use, a scale for opposition  
28  
29 to the Ben Ali regime to be read as an indicator of socio-economic and political grievance, a  
30  
31 scale for political efficacy, a scale for support for liberal religious views, level of education,  
32  
33 scale for political efficacy, a scale for support for liberal religious views, level of education,  
34  
35 occupational status, age and gender. The results for six models are shown in Table 2.  
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40 **Table 2 about here**  
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45 Reading across the different models, the results show that protest-related Internet use is  
46  
47 positively and significantly related to increased offline protest activity among the  
48  
49 respondents, even after controlling for an increasing number of additional independent  
50  
51 variables. There are other findings of note alongside the main finding for Internet use. First,  
52  
53 across models 2 to 6, opposition to the Ben Ali regime also contributes to the probability of  
54  
55 becoming involved in protest activity – a finding that goes in line with previous research on  
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3 the effect of attitudinal and opinion issues on protest behavior (Lowrance 2006; Pierce and  
4  
5 Converse 1990). Second, across models 3 to 6 a weak sense of political efficacy lowers the  
6  
7 probability of engaging in political protest activity. This finding fits in with the recent revival  
8  
9 of personality as an explanatory variable for political behavior in social science research  
10  
11 (Gerber et al. 2010; Mondak 2010). John et. al. (2011) for instance demonstrate that people  
12  
13 with an internal locus of control are significantly more likely to start a mobilization. Third,  
14  
15 across models 4 to 6 support for more conservative religious views lowers the probability of  
16  
17 involvement in protest activity. This is interesting since it supports the notion that despite  
18  
19 the success of the Islamist Ennahda party in the October 2011 elections the protest  
20  
21 movement was essentially borne by the secular segments of Tunisia's society (Lynch 2012;  
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### **CONCLUSION: THE INTERNET AND SOCIAL MEDIA AS A RESOURCE**

This article has shown how the use of the Internet and social media in Tunisia contributed to the mobilization of anti-government protests with a particular focus on those who were digitally active. The paper has made clear that Tunisia's early commitment to ICT infrastructure development (somewhat unwittingly) created an essential resource for the mobilization of nation-wide anti-regime protests. Increased frustration at the absence of socio-economic opportunity coupled with increasing exercise of government restrictions on internet use for political purposes provided the conditions from which significant cyber-activism was made possible. Digital elites traded on past examples of cyber activism, aggregated stories of government abuse and used technology to bypass state authorities to broadcast images and narratives about the Ben Ali regime that provided the information basis upon which movement activists were able to build. Internet use and social media

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3 helped overcome censorship barriers to information and provided a significant resource for  
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5 individuals to calculate their 'risk threshold' and respond to the growing sense of crisis. The  
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7 internet and social media contributed to transcend geographical and socio-economic  
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9 disparities and provided the basis to construct a national collective identity supportive of  
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11 protest action against an increasingly unpopular regime. In this way, the internet served as  
12  
13 the foundation for the articulation and aggregation of grievance, and acted as a significant  
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15 resource that helped overcome problems of collective action and foment a successful  
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17 protest movement that resulted in regime change. Our narrative analysis based on the  
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19 background interviews and secondary sources showed how digital elite was able to use the  
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21 existing infrastructure to bypass government controls and build support for a broader  
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23 opposition movement. Our quantitative analysis showed consistent and overlapping  
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25 opposition to the regime and a continuum of internet use that were translated into a greater  
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27 propensity for engaging in political protest activity. In this way, we think it is plausible to  
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29 conclude that the Internet makes a significant contribution to protest mobilization and in  
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31 particular under authoritarian rule offers a route for overcoming collective action problems  
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33 in ways that can galvanize opposition to unsavory regimes.  
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## Endnotes

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<sup>1</sup> Censor 404

<sup>2</sup> Tunisian slang expression, roughly equivalent to "bollocks" or "don't break my balls".

<sup>3</sup> The core

<sup>4</sup> <http://globalvoicesonline.org/>

<sup>5</sup> <http://mepi.state.gov/>

<sup>6</sup> Translation was essential given that many Tunisian users post in *Derya*, the Tunisian dialect which is barely comprehensible to non-Tunisian Arabic speakers.

<sup>7</sup> Yassine Ayari, blogger and cyber-activist, interview conducted in Tunis, 18<sup>th</sup> October 2011

<sup>8</sup> <http://www.aljazeera.com/news/africa/2010/12/2010122063745828931.html>

<sup>9</sup> Ben Ali step down!

<sup>10</sup> <http://www.youtube.com/watch?v=vPr8ENP-zeE>,

<sup>11</sup> Haythem El Mekki, blogger and political commentator on TV channel El Watanayah, interview conducted in Tunis, 17 October 2011.

<sup>12</sup> Sara Ben Hamadi, Blogger for Arte TV, interview conducted in Tunis, 19 October 2011.

<sup>13</sup> Nadia Zouari, Interview conducted in Tunis, 17 October 2011.

<sup>14</sup> The total is greater than 100% as respondents have multiple accounts.

<sup>15</sup> Respondents were offered three frequency options ranging from never (1) to frequently (4)

<sup>16</sup> Ordered probit calculates the degree to which independent variables raise the probability of a respondent moving into higher levels on an ordinal scale.

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Table 1: Country Traffic for Nawaat.org prior to January 2011

Country	Pageviews	Users
Canada	85.9%	43.6%
France	2.8%	11.3%
Morocco	2.0%	7.7%
Other	9.4%	37.5%

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Table 2: Descriptive summaries for the key variables from the on-line survey

	Variable name	Minimum value	Maximum value	Standard deviation	No of valid observations
Offline protest activities	Polact (composite measure)	3	16	2.933	323
	Disspolfrnds	1	4	0.723	322
	Worepolbadge	1	4	1.094	318
	Distpollit	1	4	1.153	318
	Partdem	1	4	1.006	320
Internet used for protest activities	Internetusepro (composite measure)	3	28	5.343	350
	dispolknown2	1	4	0.766	345
	dispolstrangers2	1	4	1.128	341
	infosearch2	1	4	0.768	341
	iocalinfosearch2	1	4	0.837	344
	infosharefriends2	1	4	0.938	339
	infosharestnrgrstunis2	1	4	1.188	336
	infoshareoutside2	1	4	1.169	338
Opposition to Ben Ali regime	Govsup (composite measure)	1	16	2.274	436
	Govmanecon	1	4	0.819	435
	Govmakjobs	1	4	0.660	430
	Govredist	1	4	0.559	428
	Govanticorr	1	4	0.443	429
Respect for rights and freedoms	Rightsscale (composite measure)	3	16	2.154	435
	Govprotspch	1	4	0.500	433
	Govpropress	1	4	0.445	423
	Polrespct	1	4	0.830	429
	Polresrights	1	4	0.661	435
Weak sense of political efficacy before revolution	Polefficprerev (composite measure)	4	12	1.874	404
	Prerevpoleff	1	4	0.770	403
	Prerevwellinf	1	4	0.973	399
	Prerevdiscuss	1	4	0.690	395
Support for conservative religious views	Religviews (composite measure)	2	18	3.957	308
	relinoff2	1	4	1.119	306
	favsharia2	1	4	1.194	305
	Relnoinflnce	1	4	0.987	308
	Govtprotrelfreed	1	4	0.591	304
	Relsep	1	4	1.191	306
Level of education	Educ	2	5	0.676	309
Present occupational status	Currem	1	6	1.987	303
Age	age2	1	6	1.426	299
Gender	Gender	1	2	0.417	304

Annex 2 provides further details on these variables.

Table 3. Internet use and the propensity for non-internet political activity during the Tunisian Revolution

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Internet used for protest activities	.088*** (6.99)	.086*** (6.82)	.084*** (6.59)	.076*** (5.88)	.075*** (5.83)	.074*** (5.61)
Opposition to Ben Ali regime		.103** (3.33)	.131*** (4.08)	.151*** (4.55)	.152*** (4.60)	.152*** (4.57)
Weak sense of political efficacy (pre-revolution)			-.117** (-3.34)	-.120** (-3.31)	-.120** (-3.32)	-.119** (-3.24)
Support for conservative religious views				-.036* (-2.25)	-.042* (-2.59)	-.043* (-2.58)
Level of education					-.220* (-2.40)	-.216* (-2.27)
Present occupational status						.007 (0.20)
Age	.057 (1.36)	.055 (1.29)	.025 (0.57)	.019 (0.43)	.015 (0.35)	.025 (0.50)
Gender	.077 (0.53)	.075 (0.52)	.102 (0.70)	.094 (0.63)	.142 (0.95)	.140 (0.93)
N	290	290	290	286	286	281
$\chi^2$	50.04***	61.17***	72.32***	76.14***	81.93***	79.62***
Pseudo R <sup>2</sup>	.037	.045	.053	.057	.061	.060

Order-probit parameter estimations; Z scores in parentheses; \* p<.05 \*\* p<.01 \*\*\* p<.001

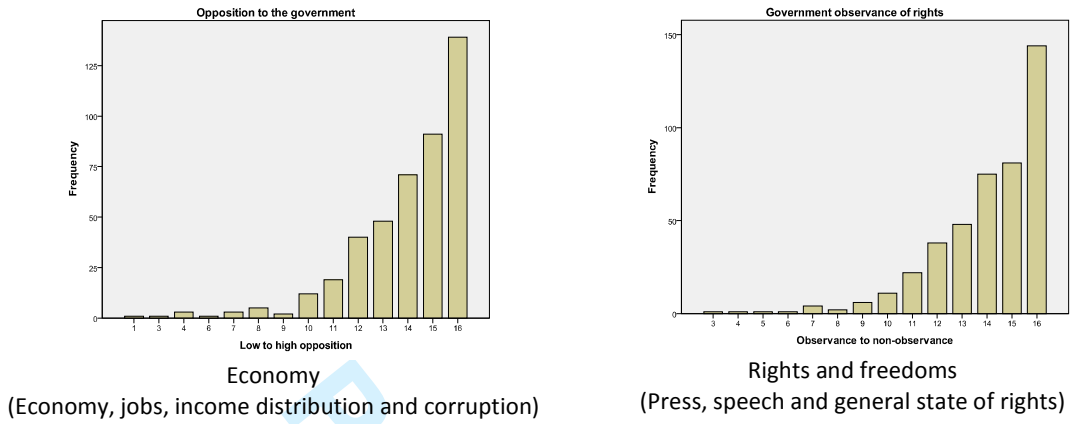
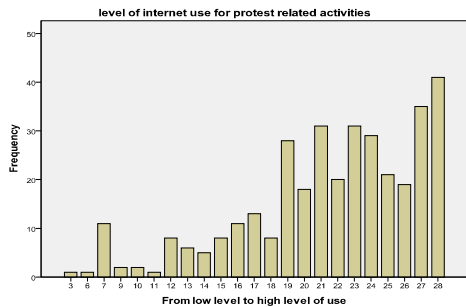


Figure 1. Levels of opposition to the Ben Ali Regime

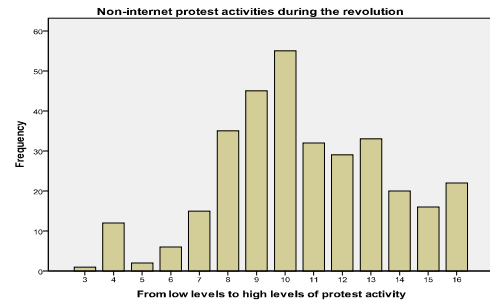
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Internet use for protest-related activities  
(discussion, searches, sharing)



Protest activity  
(demonstration, leafleting, displaying political messages, discussion)

Figure 2. Internet use for protest-related activities and protest activities during the revolution

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Level of protest activity

		Low	High	Total
Level of internet use	Low	17 (48.6%)	51 (17.8%)	68 (21.1%)
	High	18 (51.4%)	236 (82.2%)	254 (78.9%)
	Total	35 (100%)	287 (100%)	322 (100%)

$\chi^2 = 17.767; p < .001$

Figure 3. Cross-tabulation of internet use and protest activity

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### Annex 1: On-line convenience sample and socio-demographics in Tunisia

The sample that resulted from our on-line awareness and promotion is relatively old compared to the general Tunisian population with 21.9% of respondents born in the 1970s, 38.2% in the 1980s, and 9.9% born in the 1990s. The corresponding age distribution as percentage of total population in 2010 is as follows: 15.6% born in the 1970s, 18.4% born in the 1980s, and 16.8% born in the 1990s 16.8% (United States Census Bureau). Altogether, the mean age is 36 years old. With 77.6% of male respondents, the sample studied here is clearly more male-dominated than Tunisia's total population (50 % males, World Bank 2011) and also more male than the country's Facebook population (58.0%; see [www.socialbakers.com](http://www.socialbakers.com)).

The sample population is also relatively highly educated with 49.8% of respondents holding a Bachelor and 37.0% a graduate degree, compared to the Tunisian population in general where the gross tertiary enrollment ratio is 28,6% (UNESCO 2010) and the gross tertiary completion ratio 6.2% (African Economic Outlook 2012). The majority of respondents in this sample are medium to heavy users of the Internet with 28.3% reporting a daily Internet use of 3-4 hours and another 43.6% reporting daily Internet use of more than 5 hours per day. To set this roughly into proportion with the Internet usage patterns of the general Tunisian population: According the the ITU household survey of 2010, only 17.1 % of individuals over the age of ten had accessed the Internet in the past 12 months. Network embeddedness among these respondents is also relatively high. 98.5% indicated Facebook as their most important online social network, and 65.4% reported having more than 200 friends on their most important network, which is well above the worldwide average (The average number of "friends" in a Facebook network is 130). Though not generalizable on these features to the larger Tunisian population, the sample does provide valuable insights into a subset of

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Tunisian citizens previously shown to have been well educated, digitally literate, and socially interconnected.

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## Annex 2: Further details on key variables

### *Offline protest activities*

Below is a list of different forms of political action that people may undertake offline in their real life. For each of these activities please tell us whether between December 2010 and January 2011 you engaged or considered engaging in one of these activities (question 18 a –d; variables 76 - 79).

Discussing the political situation face to face with relatives, friends, colleagues, or neighbors

Wearing a button, sign, or sticker with a political message

Distributing political information material (leaflets, brochures etc)

Participating in demonstrations

These were responses were summed to create a scale of offline protest activities (variable 132 *polact* )

### *Internet used for protest activities*

Thinking about different activities that people can perform on the Internet in relation to politics, please indicate in which of them you engaged and how often during the revolution (question 15 a – g; variables 56 - 62)

Discuss online/ Chat about the political situation and its causes with unknown people

Search for information about the protest movement and related events in other parts of the country

Search for information about the protest movement and related events in my own city/town/municipality

Share/distribute information about the protest movement and related events with friends/relatives/neighbors/colleagues

Share/distribute information with unknown people living inside Tunisia

Share/distribute information with people living outside Tunisia

*The original question ordered responses 1 = once 2 = Several times 3 = Often 4 = Never*

*These were recoded so that the response order was 1=Never 2 = Once 3 = Several times 4 = Often (variables 125-131) and then summed (variable 136 *internetusepro*)*

### *Opposition to Ben Ali regime*

#### **Respondents views towards Ben Ali Regime's policies (govsup)**

First of all, how well or badly would you say the government of Ben Ali was at handling the following matters? (Question 1 a –d; variables 3 – 6)

How effectively did government narrow gap between rich and poor (govredist)

How effectively did government create jobs (govmakjobs)

How effectively did government manage economy (govmanecon)

How effectively did government combat corruption (govanticorr)

Responses were coded 1 = very good 2 = good 3 = bad 4 = very bad ie from strong to weak support and summed (variable 133 govsup)

#### **Rights and Freedoms (rightsscale)**

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3 Under the government of Ben Ali, to what extent do you think were the following freedoms guaranteed in  
4 Tunisia? (question 3 a - b)

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6 Freedom of speech

7  
8 Freedom of press

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10 How much would you agree to the following statements: (question 4 a – b)

11  
12 When having contact with the police I was always treated with respect

13  
14 The police respected people's rights

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16 *Weak sense of political efficacy before revolution*

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18 how much would you agree to the following statements? (Question 6 a – c; variables 14 – 16)

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20 Prior to the revolution, people like me could influence the way in which political decisions were taken in Tunisia

21  
22 Prior to the revolution I felt well informed about the political situation in Tunisia and I felt sufficiently informed to discuss politics with  
23 other people.

24  
25 I felt confident to freely discuss the political situation in Tunisia with other people.

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27 Responses were coded 1 = agree strongly 2 = agree 3 = disagree 4 = disagree strongly ie from strong to weak sense of political efficacy  
28 and summed (variable 141 polefficprerev)

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30 *Support for conservative religious views*

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32 People think differently about how politics and religion should relate. For each of the following statements  
33 please tell us how much you agree or disagree (Question 26 a to e; variables 26 a – e)

- 34  
35 a. Religious leaders should not influence government (relnoinflnce)
- 36  
37 b. It would be better for Tunisia if more people with strong religious beliefs held public office (relinoff)
- 38  
39 c. The government should protect religious freedom (govtptotrelfreed)
- 40  
41 d. Religious practice is a private matter and should be separated from socioeconomic life (relsep)
- 42  
43 e. The government should make laws according to Islamic law / the laws of the shari'a (favsharia)

44  
45 Responses went from 1= agree strongly 2 = agree 3 = disagree 4 = disagree strongly

46  
47 The responses to b. and e. were recoded ( b - relinoff2 variable 137; e – favsharia2 variable 138 ) so that all responses ran from liberal  
48 to conservative; the responses were then summed religviews variable 139)

49  
50 *Level of education*

51  
52 What is your highest completed educational level

- 53  
54 a. Primary School
- 55  
56 b. Secondary School (college)
- 57  
58 c. Preparatory School (lycée)
- 59  
60 d. DEUPC (Diplôme d'études universitaires de premier DEUPC (Diplôme d'études universitaires de premier cycle) or DUT  
(diplôme d'études universitaires technologiques, or DUT)
- e. Doctorate, DESS or DEA (*Diplôme d'Études Approfondies*)

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3 Present occupational status (curremp)  
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5 Age (age2)  
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7 Gender (gender)  
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