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# **ONLINE SOCIAL MEDIA AND POLITICAL AWARENESS IN AUTHORITARIAN REGIMES**

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## **ONLINE SOCIAL MEDIA AND POLITICAL AWARENESS IN AUTHORITARIAN REGIMES**

Does online social media undermine authoritarianism? We examine the conditions under which online social networks can increase public awareness of electoral fraud in non-democracies. We argue that a given online social network will only increase political awareness if it is first politicized by elites. Using survey data from the 2011 Russian parliamentary elections, we show that usage of Twitter and Facebook, which were politicized by opposition elites, significantly increased respondents' perceptions of electoral fraud, while usage of Russia's domestic social networking platforms, Vkontakte and Odnoklassniki, which were not politicized by opposition activists, had no effect on perceptions of fraud. Our study elucidates the causes of post-election protest by uncovering a mechanism through which knowledge of electoral fraud can become widespread.

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"These elections were completely new for Russia—in these elections transparency was measured not by abstract election observers, unknown to anyone, but by the friends and acquaintances, who were your “friends” on Facebook and Twitter. Irrespective of office, [these Facebook friends] gave everyone the opportunity to form an opinion about the level of transparency and fraud in the elections..."

*Russian News Service, Interfax, 5 December 2011*

## **Introduction**

Few would argue against the claim that democracy depends on an informed electorate. Citizens require unfettered access to objective information in order to hold leaders accountable and make educated decisions in the public sphere. For decades, traditional media such as newspapers, radio and television have been the primary means by which citizens acquire political information. Authoritarian regimes restrict media freedom specifically so that citizens cannot gain access to information that might turn them against the regime. But the rise of new media, such as the internet and online social networks, has led many observers to question whether authoritarian regimes can still control the flow of information within their borders (Shirky 2011). According to these observers, new media lowers the costs of acquiring independent information, reduces barriers to collective action, and, thereby, undermines authoritarianism. After the Arab Spring in 2011, a slew of media and scholarly reports emerged linking the success of anti-regime mobilization in the Middle East to the savvy usage of new media by protesters (e.g. Cottle 2012)

At the same time there are ample numbers of pessimists who argue that new media may not destabilize authoritarianism, as authoritarian leaders adopt new methods for controlling dissent in these arenas (Morozov 2011). Indeed, some scholars have questioned whether the real effect of new media during the Arab Spring was as pronounced as journalistic accounts suggested (Lynch 2011), while recent studies (in democracies) find that the effect of new media usage on political awareness is mixed (Groshek & Dimitrova, 2011; Kaufhold et al., 2010),

This disharmony in the literature is due to the tendency of political scientists to treat new media as a black box (Farrell 2012). In other words, little effort is made in the existing literature to spell out the causal mechanisms by which this or that type of online activity translates into specific outcomes that undermine authoritarianism. In this paper, we focus on how a specific type of online activity contributes to a specific outcome thought to be correlated with authoritarian breakdown. Concretely, we study how the usage of online social media—internet-based social networking sites such as Facebook and Twitter—affects political awareness in authoritarian regimes. Despite the avalanche of media accounts touting the role of social media in abetting recent protest movements, there are few academic studies of its role in authoritarian

regimes. In particular, there are very few rigorous studies on the effect of online social media usage on political awareness and there are almost no empirical studies of its effect in authoritarian settings.

The literature on online social media suffers from some of the same theoretical deficiencies as the literature on the Internet. Namely, it does not distinguish among the effects of different types of online social media usage. We argue that online social media usage can, *under certain conditions*, increase political awareness in authoritarian regimes. Social network usage differs from other types of internet behavior because these networks 1) expose users to new information that they did not actively seek; 2) provide a forum where users can access information that is ‘recommended’ by friends and family, which increases the probability that the information will be trusted; and 3) facilitate communication and collaboration about informational inputs. But social networks also vary in their content and structure. In authoritarian regimes, opposition elites spread political information on certain networks, but not on others. Thus, we argue that usage of a given online social network will only increase political awareness if the network itself has been politicized.

To evaluate these claims, we examine variation in public awareness of electoral fraud in an electoral authoritarian regime. Public awareness of fraud is uniquely important in electoral authoritarian regimes because of its potential to ignite anti-regime mobilization (Tucker 2007). There are now an increasing number of cases in which widespread electoral fraud has sparked large anti-regime protests (e.g. Georgia 2003, Ukraine 2004, Russia 2012, Iran 2009). How is it though, given the difficulty of acquiring information about electoral fraud in state-controlled media environments, that citizens learn of these violations? By elucidating how such information is spread in the 21<sup>st</sup> century, our paper sheds light on the causes of electoral revolution under autocracy.

We test our claims with data from a nationally representative survey of 1600 adults conducted in the wake of the 2011 Russian parliamentary election. In these elections, independent observers identified large-scale electoral fraud, but, as our data shows, there was significant variation in public awareness of this fraud. We find that usage of social networks that had been primed by opposition elites with information about electoral fraud increases an individual’s awareness of electoral violations. For various reasons that we explore, Russian opposition activists facilitated the spread of information about electoral fraud on social networks such as Facebook and Twitter, while opposition activists did less to politicize more widely used native Russian platforms, such as VKontakte and Odnoklassniki. Usage of VKontakte and Odnoklassniki, Russia’s largest social networking platforms, had no effect on a respondent’s probability of perceiving electoral violations. Meanwhile, controlling for a range of factors that

might predict awareness of fraud, we find that usage of Facebook and/or Twitter significantly increased the probability that an individual perceived significant electoral violations

We also find that the effect of Facebook/Twitter usage on awareness of fraud is larger in regions with relatively high levels of press freedom. The ability of activists to politicize social networks depends on the availability of ‘inputs’, or information that can be fed into online social networks. In regions with relatively high levels of press freedom, more such information was available in the media, which could then be used to prime social networks.

This work contributes to the growing literature on the Internet and politics (Farrell 2012). We identify a specific mechanism by which usage of specific types of new media can undermine authoritarianism. We add nuance to the growing journalistic consensus that online social networks are an unambiguous force for democratic change by showing that not all social networks have an effect on levels of political awareness. In order to have an effect on awareness, online social media must first be politicized.

Our work suggests that online social media can, *under certain conditions*, undermine authoritarian rule. But our study also warrants a note of caution for the near term. Fewer than 7% of Russians use Facebook or Twitter—the networks that actually have an effect on political awareness—so the aggregate effect of these networks on public attitudes remains limited. Although usage of Western social networks is exploding in Russia, current rates of usage are still low (as they are in many non-democracies) so observers should not overestimate the ability of Facebook and Twitter to undermine authoritarian regimes in the near future. Meanwhile, almost 1 in 3 Russians use domestic social networking platforms, which, as we show, are more easily monitored and controlled by the government. This potential for government intervention dissuades opposition elites from spreading anti-regime information over those networks. Thus, authoritarian governments are not defenseless in the face of technological change

Finally, we have put forth a new approach to the question of how citizens in non-democratic regimes acquire information and develop actionable anti-regime grievances. Protest movements develop from common perceptions of regime malfeasance, but achieving generalized public awareness of such malfeasance is difficult (Kuran 1991, Tucker 2007). We highlight a mechanism by which the informational cascades that sometimes bring down modern authoritarian regimes can get their start.

## **Political Awareness, The Internet, and Authoritarian Regime Survival**

Scholars have devoted considerable attention to how citizens learn about and evaluate political events (Zaller 1992, Chaffee et al., 1994). Unsurprisingly, exposure to traditional media sources is a primary determinant of political awareness, but the effect significantly depends on the type

of media (Eveland and Scheufele 2010, de Vreese and Boomgaarden 2006). Whereas newspaper reading has generally been found to be a strong and positive predictor of political knowledge, the results are less clear on other forms such as television and radio (Chaffee and Kanihan 2010).

Although similar studies on the effect of online activity have been much fewer in number, there is burgeoning interest in the question of how Internet usage shapes political awareness (e.g. Althaus and Tewksbury 2000, Kwak et al. 2006, Gil De Zuniga et al. 2009, Boulianne 2009). On the one hand, by lowering the cost of information transfer, the Internet helps users access alternative viewpoints as well as identify and associate with individuals who share their opinions (Farrell 2012). At the same time, this social nature of Internet media consumption may act to polarize users, creating self-contained clusters that actually have a negative effect on general political awareness (Sunstein 2002, Prior 2005). However, this effect may be limited to only a certain subset of very active Internet users; large sample empirics suggest that using the Internet exposes individuals to more dissenting points of view than personal social interaction (Gentzkow and Shapiro 2010).

In authoritarian regimes, where access to independent traditional media is limited, Internet access may have an especially large impact on political awareness. Using an instrument for Internet penetration in Malaysia, Miner (2011) finds that Internet growth increased exposure to alternative viewpoints, which turned popular opinion against the incumbent regime and contributed to a decline in ruling party vote shares. Experimental evidence from Tanzania also suggests that giving citizens access to the Internet later influenced their evaluation of electoral fairness (Baillard 2012). However, other work has questioned whether new media is a boon to oppositions, highlighting the many ways authoritarian leaders can harness the Internet to spread disinformation, monitor opponents, and gather information (Aday et al. 2010, Kalathil and Boas 2003, Morozov 2011).

How then do we reconcile these seemingly contradictory perspectives about the effect of Internet usage on political change in non-democratic regimes? On the one hand, the Internet can provide unfettered access to independent information, which then potentially drives changes in preferences and political behavior. On the other, authoritarian regimes retain many levers for influencing the Internet. Not only do we have an incomplete understanding of how autocrats manipulate the Internet, but we also know little about what political information users actually consume online.

## **Political Awareness and Online Social Media**

In this article, we focus on one particular use of the Internet: online social networking. Following Boyd and Ellison (2007), we define online social network sites as “web-based

services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system.” Online social networks exhibit a specific set of characteristics that distinguish them from traditional media and non-social Internet media. First, we draw a clear distinction between normal Internet browsing, which requires an intentional page click to access information, and online social media, which often inadvertently presents users with a disparate information streams. Depending on the architecture of the online network, members may simply scroll quasi-randomly through recommended links to outside outlets as well as through friends’ commentaries and discussions. This ‘accidental exposure’ to new views may be especially frequent on sites with a broad user base.

Secondly, just as sophisticated citizens make inferences on the credibility of traditional news sources (Miller and Krosnik 2000), online users evaluate the trustworthiness of information from links and references by socially networked “friends”. We claim that news articles from these trusted acquaintances may carry additional weight in influencing the way information is processed. Online group participation may also have reinforcing effects on political sophistication by broadening and deepening political thinking (Gajora 2011).

Thirdly, social networks open up opportunities for users to engage in informal communication based on informational inputs. Discussions emerge organically on most major networking sites through comments on shared links and articles. Interactions within personal relationships have been found to strongly influence political views and improve opinion formation (Huckfelt and Sprague 1995). Online communities can act as an extension of the physical discussion networks found to be so powerful (Campus et al. 2008), while at the same time introducing and incorporating various forms of media into the dialogue.

There is disagreement about the effects of online socializing on political awareness. Some scholars (as well as many journalists and pundits) see a positive correlation between online social media usage, political knowledge, and civic activism (Shirky 2012). In a recent review of the literature, Boulianne (2009) cites evidence that participation in online social groups is linked to greater levels of political engagement. One survey in the US found that users of social media sites expressed increased support of democratic political values (Swigger 2012). Other studies have found positive associations between online social media usage and offline civic engagement (Pasek and Romer 2009).

In authoritarian regimes, observers have suggested that online social networks may facilitate the spread of independent information outside the control of government censors. In 2011, Western media was filled with accounts of how Facebook and Twitter facilitated anti-

regime mobilization during the Arab Spring (Cottle 2011). A snowball survey of protestors in Egypt during the 2011 uprisings indicated that Facebook and Twitter aided organizers in communicating human rights violations and coordinating the growing protest movement (Tufekci and Wilson 2012). Amplifying traditional media sources, these networks helped structure opposition to the regime through information dissemination (Howard and Hussain 2011, Lynch 2011).

However, other recent work suggests that online social media may be far less effective at raising political awareness. An analysis of a Swedish panel survey found that using social media had a strong effect on an individual's likelihood of joining offline political activities, but little to no effect on his or her individual knowledge of political issues (Dimitrova et al. 2011). These findings complement other studies of American political behavior which find no relationship between online social networking and political awareness (Groshek and Dimitrova, 2011; Kaufhold et al., 2010). The story is the same in authoritarian regimes, as some of the most prominent studies of new media during the Arab Spring, have pointed out the ways that authoritarian leaders have successfully stemmed the spread of information on online social networks (Lynch 2011). In sum, scholars are divided about the effect of social media on political awareness.

### **Political Awareness under Authoritarianism: The Case of Electoral Fraud**

In this paper, we focus on how online social media usage affects a specific type of political awareness: knowledge of electoral fraud. Utilizing their control over the media and civil society, autocrats work hard to conceal electoral violations. They do this because they know that public awareness of electoral fraud has the potential to encourage mass opposition and imperil the regime. When knowledge of electoral fraud is widespread, it may come to constitute a shared grievance that spurs mass political action. As proponents of relative deprivation theory might predict (Gurr 1970), grievances can be particularly hard-felt in the case of stolen elections as the opposition achieves victory only to have it pulled from their grasp at the last minute (Thompson and Kuntz 2004).

Second, in contrast to, say, a bad experience with a government ministry, electoral fraud is a grievance felt by all citizens. Tucker (2006) suggests that this lowers the costs of mobilization because citizens have good reason to believe that they will not be alone in speaking out and that their chances of being repressed during a protest are low. In this setting, revolutionary bandwagons can develop as additional protestors draw even more protesters into the streets (Kuran 1991). Indeed, recent history contains multiple examples—e.g. the Orange Revolution in Ukraine, the Rose Revolution in Georgia, and the Bulldozer Revolution in Serbia—of fraudulent

elections inciting massive anti-regime mobilization followed by regime change.

Thus, perhaps more than any other grievance, electoral fraud has the potential to ignite significant anti-regime mobilization. For those interested in understanding how and when electoral authoritarian regimes transition to democracy, there are few arenas of civic engagement that are more important than public awareness of electoral fraud. But awareness is not automatic. By its very nature covert electoral fraud needs to be discovered and information about it disseminated. Perpetrators of ballot stuffing, disenfranchisement, tabulation fraud, and intimidation conceal their actions.

The spread of information about electoral fraud requires first that someone—election observers, journalists, or ordinary citizens—take note of abuses. And second, it requires that first-hand accounts are passed on to others, for example by civil society groups (such as vote monitoring organizations) or by journalists via traditional media sources. These second-hand accounts of electoral fraud may then spread via traditional media or *horizontally* via new media, such as social networking sites. Similarly, first-hand witnesses of fraud may share their experiences through word of mouth or new media.

Thus, in any regime, information about electoral malfeasance is not easily disseminated. But the costs of disseminating and acquiring information about electoral fraud are especially high in authoritarian regimes. In many electoral authoritarian regimes, the state controls most major news outlets. These outlets have little incentive to disseminate information about the regime's electoral abuses. Privately owned media outlets, meanwhile, are frequently subjected to pressure, and self-censorship is widespread. Similarly, electoral authoritarian regimes repress civil society organizations that seek to publicize information about electoral fraud.

Despite all this, the mass public sometimes becomes aware of electoral fraud in electoral authoritarian regimes, unleashing a process that can lead to large-scale anti-regime mobilization. And yet in other cases, publics remain ignorant of rampant electoral fraud. Moreover, as we demonstrate for the case of Russia below, there is significant variation in awareness of electoral fraud across citizens within any given country. What explains this variation? Given all the control that authoritarian regimes exercise over channels of communication, the strong incentives that autocrats have to hide fraud, and the high costs associated with acquiring information about electoral fraud, how is it that citizens become informed about electoral fraud in authoritarian regimes?

## **Electoral Fraud and the 2011 Parliamentary Elections in Russia**

On December 4, 2011, Russia held its sixth parliamentary election since the break-up of the Soviet Union. The election took place under the framework of Russia's electoral

authoritarian regime, in which the ruling party, United Russia, controls the vast majority of elected offices at the national, regional, and local level. Although United Russia's popularity had waned slightly over the course of 2011, most observers expected the party to win the elections handily and secure a comfortable majority (Reuter 2011).

Regime leaders required a comfortable victory for United Russia in these elections for two reasons. First, quite simply, under the Russian constitution, the State Duma (Russia's lower house) is a relatively powerful policy-making institution with the authority to pass laws, override presidential vetoes, impeach the president, and declare no confidence in the government. Thus, Prime Minister Putin and President Medvedev wished to keep their ruling party in control of the Duma. Second, the Russian parliamentary elections were important because they traditionally have been scheduled just three months before the Presidential elections in March. With Putin planning another run at the Presidency, it was important for his image that his party win a clear victory in the December parliamentary elections.

The results of the elections were a mild shock to most. United Russia managed to garner only 49.32% of the vote, which translated into a slim 13 seat majority in the Duma and a loss of 77 seats from their previous Duma faction. Moreover, as became clear in the immediate aftermath of the election, the authorities had perpetrated some measure of fraud in order to secure that result. In addition to manipulations of the electoral process that occurred well before election day, such as repression of the opposition and media censorship, ballot-box fraud was widespread on election day.

Opposition leaders estimated that ballot box fraud account for as much as 20% of United Russia's vote total. More objective sources estimate slightly lower, but still significant, levels of fraud. One field experiment conducted by a team of Russian social scientists, in which election observers were randomly assigned to polling stations in Moscow showed that United Russia received, on average, 11% fewer votes in polling stations with observer.<sup>3</sup> Exit polls, including polls from independent polling organizations, put the level of fraud much lower at around 2-3%.

Allegations of electoral abuse touched off mass protests, the largest of which numbered almost 100,000 protesters. State-run television, surprisingly, devoted significant coverage to the protests but, unsurprisingly, was silent on reports of fraud. Private television networks devoted some attention to fraud, but the vast majority of Russians—72% according to a December 2011 poll—count state-run television as their primary news source.<sup>4</sup> Most national radio stations eschewed coverage of electoral fraud as well.

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<sup>3</sup> Observers were only randomized in Moscow, such that country-wide estimates of fraud were not possible.

<sup>4</sup>Levada Courier Survey, *Levada Center*, December 2011 (See footnote 21 for survey methodology).

Coverage of electoral fraud was varied in print media. State-run newspapers and those with historically close ties to the Kremlin devoted little coverage to fraud, while oppositional newspapers and those read by the Moscow intelligentsia—Novaya Gazeta, Vedomosti, Kommersant, Nezavisimaya Gazeta—devoted ample page space to electoral abuses. However, these newspapers have only limited daily circulations and none reach outside major urban areas.

Most civil society groups and NGOs were silent on the issue of electoral fraud. One important exception, however, was GOLOS (in Russian, *voice*), an independent election monitoring organization. Despite periodic harassment by the authorities, the group organized trainings for vote monitors, conducted a parallel vote count, and set up a hotline for reporting electoral violations.<sup>5</sup> Crucially, it also compiled and disseminated detailed information on incidents of electoral subversion. Using online crowd-sourcing techniques, GOLOS created a real-time map (*Karta Narusheniya*, or Violations Map) containing 6400 individual allegations of electoral fraud.

While electoral abuses were given only spotty coverage in traditional media outlets and ignored by most civil society groups aside from GOLOS, information on electoral fraud was relatively accessible on the Internet. Prominent Internet news outlets such as Slon.ru, Gazeta.ru, and the New Times wrote about reports of electoral fraud and printed analyses by social scientists. Blogs—particularly those hosted by LiveJournal.com—buzzed with posts detailing first-hand accounts of fraud, analyses of electoral returns, and links to articles on electoral fraud. Of the top 25 Russian LiveJournal blogs, 8 were run by opposition activists who posted extensively about electoral fraud during the 2011 elections.<sup>6</sup> Russia's most-well known political blogger, Alexei Navalny, ran Russia's 3<sup>rd</sup> most popular LiveJournal blog, which prior to the election was used primarily as a platform for publicizing corruption scandals. During the election campaign, Navalny focused more attention on electoral abuses. In December 2011, Navalny became one of the leading members of the committee responsible for organizing street protests.

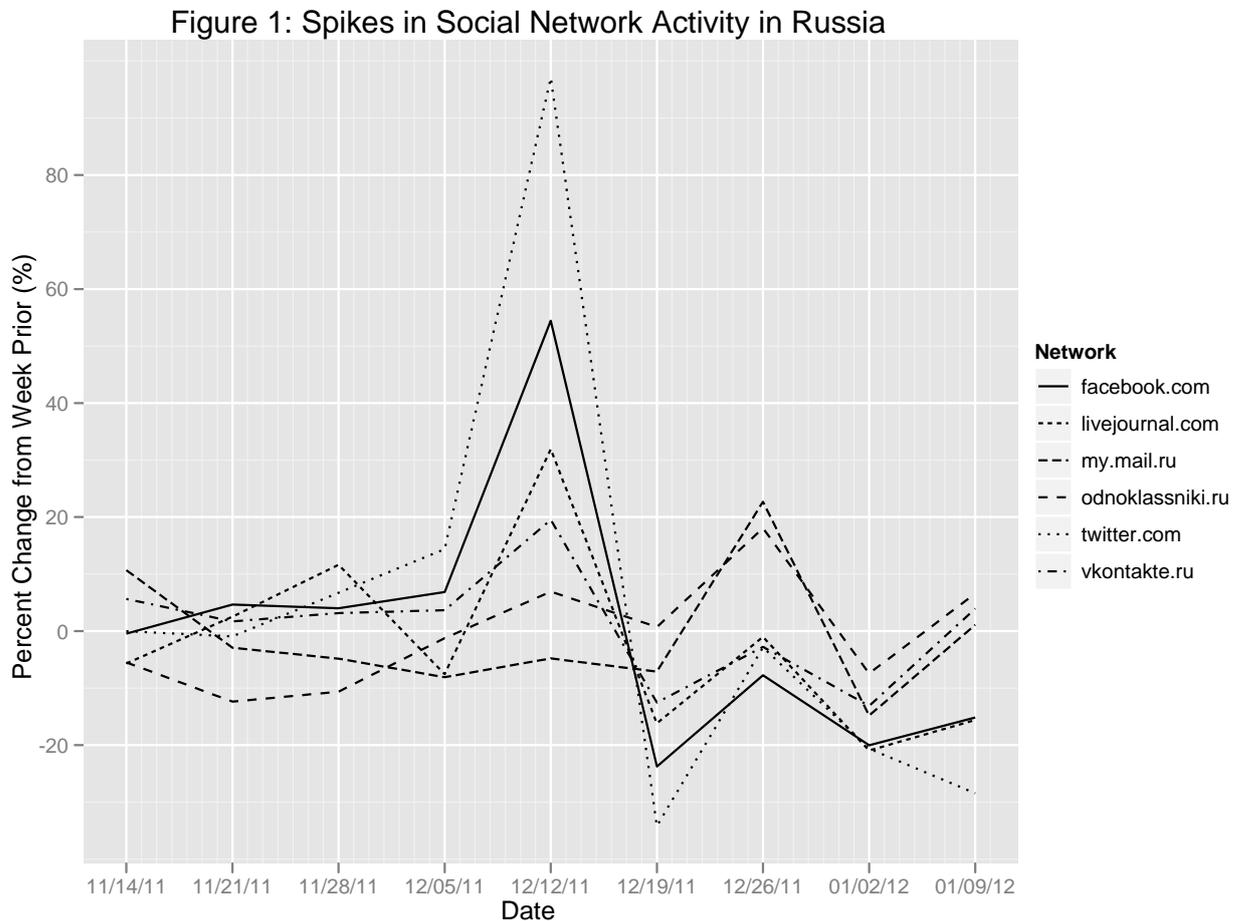
Other online media also buzzed with information about electoral fraud. In recent years, Russian activists have increasingly used social media platforms—such as Facebook and Twitter—to disseminate information about public affairs (Etling et al 2011, Toepfl 2011, Greene 2012). Before and after the elections, eyewitnesses posted accounts of their experiences with fraud on these sites, and opposition activists passed on secondary information about electoral

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<sup>5</sup> In one notable instance, the organization's offices were invaded by reporters from NTV, a television network with close ties to the Kremlin. Days later, the television station aired a documentary slandering GOLOS, alleging that the organization took direct orders from the US State Dept. In another instance, Liliya Shabanova, GOLOS' director, was detained at the airport while reentering Russia and had her laptop and other personal effects confiscated.

<sup>6</sup><http://blogs.yandex.ru/top/lj/> Accessed July 15, 2012.

abuse. Figure 1 shows the week-on-week percent change in usage for several popular online social media platforms in Russia. As the figure shows, Russian social network usage experienced a dramatic spike in usage during the week of the December 4 elections. Facebook usage, in particular, almost doubled. Thus, as we discuss in more detail below, citizens and activists used social networking platforms to disseminate accounts of electoral abuse.



In sum, information on electoral fraud was available, but not always readily accessible. To receive information on electoral fraud, one had to go online or have access to certain elite media sources, such as *Kommersant* or *Vedomosti*. In this setting, awareness of electoral violations varied. According to the Levada Center’s December 2011 omnibus poll, 55% of Russians thought there were either no violations or insignificant violations in the elections, while 19% thought that there were electoral violations significant enough to affect the final results of the elections. Below, we identify the conditions under which usage of social networks influenced voters’ assessments of the severity of electoral fraud.

### **Online Social Media and Awareness of Electoral Fraud**

Under *certain conditions*, online social media can be a powerful tool for spreading information about electoral fraud. First, by aggregating submissions from an enlarged network, users are

more prone to “accidental exposure” to a wider variety of sources and viewpoints about the conduct of elections. Increased variety of news sources has been shown to be correlated with improved knowledge and objectivity in evaluating political events (Prior 2005, Mullainathan and Shleifer 2005). Moreover, online social media users need not actively seek information on fraud in order to be exposed to it; the network itself neatly organizes this consumption array. This mitigates the extent to which audience segmentation might diminish social media’s effect on awareness of electoral fraud.

Second, information on fraud that is recommended (‘liked’) by trusted friends, family, or associates is more likely to be assimilated (Bakshy et al. 2012, Miller and Krosnick 2000). In other words, personalized information and recommendations can increase the perceived reliability of submissions at a relatively low cost. Moreover, the growing popularity of cell phone cameras allows for quick and cost-effective uploading of videos of suspected electoral violations; denying the pervasiveness of fraud is much harder when identifiable officials are shown on camera breaking the law.

Thus, the social component of these online sites creates a “collaborative ecosystem” where user-submitted information can spread quickly and compete with official news narratives about fraud (Alexanyan et al. 2012). In countries where the government exerts significant control over the media environment, online social media not only may reduce the costs of acquiring information but also provide an information source outside government censors.

However, as scholars of offline social networks have cautioned, analysis of online social media usage must begin with an understanding of the content and structure of networks (Lessig 1999). Many of online social media’s theoretical advantages uniquely depend on the active participation of influential elites to drive information distribution across networks. These elites help produce informational contagion, given their large number of followers and active presence on networks (Yang and Leskovec 2009, Siegel 2008, Tonkin et al. 2012).<sup>7</sup> Once information is introduced into the network it tends to spread organically. An experimental approach using Facebook uncovered that once novel information is introduced into an environment, it spreads most through weak ties (Bakshy et al. 2012). But again, this process of diffusion is facilitated if elite users initiate the process. In the case of electoral fraud awareness, the ability of online social media to help disseminate independent information relies critically on influential

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<sup>7</sup> The structure of the network itself may determine how essential elites are to information dissemination. Siegel (2008) outlines four types of network structures: Small World, Village, Opinion Leader, and Hierarchical. Though we know of no work that applies this typology to online behavior, Siegel’s definition of an Opinion Leader as a place where “most people have few connections, while a few—the opinion leaders—have many” (“star” or “wheel” networks), appears closest to our conception of online social media (Siegel 2008). His prediction about information diffusion for Opinion Leader networks argues that the number of elites present is most important for behavior adoption and diffusion, as followers tend to follow leaders.

individuals who can highlight, frame, and promote specific evidence that contradicts the official state line.

Under this stylistic model, it seems natural that online social media can vary widely according to the presence or absence of critical elites to prime the network space. For our example of electoral fraud, we argue that a given social media outlet will only increase popular awareness when it is politicized by core opposition activists, i.e. non-regime affiliated leaders that are actively working to share more independent information about political events. In other words, the effect of online social media usage on awareness of is dependent on the type of political information that has been injected into the network. Among social networks without this elite politicization, information inputs about electoral fraud would neither make its way into the network structure nor find popular footing; users would simply not be exposed to the variety of political information necessary to build awareness. Thus we argue that social networks containing information about electoral violations will increase awareness of fraud in non-democratic regimes, while those that have not been politicized with such information will not raise awareness.

This perspective also generates predictions about how the surrounding information environment will affect the way that online social media can be used to spread awareness about electoral fraud. Conventional wisdom holds that the Internet and online social media are more important conduits of information dissemination in authoritarian regimes precisely because other conduits of information dissemination—free traditional media—are largely absent. This is plausible for the Internet as a whole, but the discussion above suggests that online social media must first be primed with information about fraud if it is to significantly amplify users awareness of fraud. Thus, our framework suggests that the effect of online social media usage on awareness of electoral fraud in authoritarian regimes like Russia will actually be higher in environments with relatively free traditional media. In such environments, opposition activists and elite users can more easily gain access to secondary information about vote fraud, which can be used to prime online social media.

## **Online Social Media and the 2011 Russian Parliamentary Elections**

We have argued that usage of online social networks will only increase a citizen's awareness of government malfeasance, such as electoral fraud, *if* that network has been politicized to contain information on malfeasance. In the case of Russian electoral fraud, activists chose to concentrate their politicization efforts more heavily in Western social media outlets such as Facebook, Twitter, and LiveJournal, while native Russian social networks such as VKontakte, Odnoklassniki, MoiKrug, and MoiMir remained less politicized. In this section, we

describe these networks and how they were used at the time of the 2011 Russian State Duma elections. Then, on the basis of the argument above, we derive hypotheses about how usage of social networks in Russia affects awareness of electoral fraud.

Facebook, the world’s largest social networking site, is the most-used social networking site in 127 countries.<sup>8</sup> But Facebook’s dominance does not extend to every corner of the world. In China, Iran, Vietnam, Kazakhstan, Latvia, Ukraine, Armenia, Kyrgyzstan, Belarus, Moldova and Russia, local social networking platforms remain dominant. In Russia, for instance, the largest social networking platform by most metrics is VKontakte. Founded in 2006 by recent university graduate Pavel Durov, Vkontake is jointly owned by a group of Russian entrepreneurs (including Durov) and the Mail.ru group, 45% of which is owned by metals magnate and Gazprom executive Alisher Usmanov. With a design interface that bears a striking resemblance to Facebook’s, VKontakte targets a general audience and offers features—private/public messaging, groups, privage/public pages, and image tagging—that are nearly identical to those offered by Facebook. As Table 1 shows, 47% of Russian Internet users—23% of the population—reported using VKontakte as of December 2011.<sup>9</sup> Only 10.4% of Internet users used Facebook. Notably, unlike some contemporary authoritarian regimes like China and Iran, Russia does not block access to Western social networking sites, so the dominance of domestic social media platforms is due to market factors.

**Table 1: “Do you regularly spend time on social networking sites? If so, which?”**

Network	Share of Internet Users	Share of all Respondents
Odnoklassniki	51%	25.3%
Vkontakte	47%	23.4%
Moi Mir	22%	10.8%
Facebook	10.4%	5.2%
Moi Krug	6.7%	3.3%
Live Journal	3.8%	1.9%
Twitter	3.3%	1.6%

<sup>8</sup> According to data compiled in June 2012 by the social media analyst Vincenzo Cosenza <http://vincos.it/world-map-of-social-networks/>

<sup>9</sup> Levada Courier Survey, *Levada Center*, December 2011 (See footnote 21 for survey methodology). Data based on both registered users and page views shows that VKontakte is larger than Odnoklassniki. For example, according to data from the Russian affiliate of the market research firm. TNS Global, VKontakte was used by 53.4% of Russian Internet users in August 2011, while Odnoklassniki was used by 38% of users. MoiMir was used by 43.8% of users and Facebook was used by 24%. Our survey data, which is based on a question about “regular” communication on social networking sites tells a slightly different story, but all data sources agree that VKontakte, MoiMir, and Odnoklassniki are much more widely used than either Facebook or Twitter.

Russia's other dominant social networking site, Odnoklassniki (Classmates), was founded in 2006 by Russian programmer Albert Popkov. Since August 2010, the site has also been owned by the aforementioned Mail.ru group. Odnoklassniki has all the typical social networking features. Two other native Russian social networks are Moi Mir and Moi Krug, each of which is significantly smaller than Odnoklassniki or Vkontakte.

LiveJournal is a blogging platform with many social media features, such as detailed member profiles, "friending", private messaging, and an active commenting culture. LiveJournal was founded as a Western blogging platform, but, after becoming the most popular blogging platform in Russia, it was sold to SUP media, an international media company based in Moscow. Over half of the site's visitors are in Russia.<sup>10</sup>

In Russia, Facebook, Twitter, and LiveJournal were most likely to be primed with information on electoral fraud, while considerably less information on electoral fraud circulated on native Russian social networking sites. Looking again at Figure 1, we see that the spikes in usage of Facebook, Twitter, and, to a lesser degree, Live Journal during the week of the elections were much more pronounced than spikes in the usage of native Russian social networking platforms. Facebook usage increased by half during the week after the elections, while Twitter usage almost doubled. Usage of Vkontakte, meanwhile, increased by only 19% and usage of Odnoklassniki remained unchanged. This indicates that political information about the elections was circulating primarily on Western outlets.

Indeed, press reports paint a picture of activists using Facebook and Twitter for sharing political information while shunning VKontakte.<sup>11</sup> The first mass protest after the elections (on December 10<sup>th</sup>) was organized by political activists via Facebook. Two days before the protest, 30,000 people had signed up to attend on the event's Facebook page, while only 10,000 were signed up on VKontakte (the event had no page on Odnoklassniki). Considering the fact that Vkontakte has five times as many users as Facebook, this disparity is even more noteworthy.

Prominent elite opposition activists focused their social media efforts on Western outlets. For example, Alexei Navalny, Russia's most popular political blogger, maintained an active public Facebook page, with 23,466 "Likes" and multiple posts each day.<sup>12</sup> He is also an active Twitter user with over 250,000 followers. On the day of the elections, Navalny tweeted over 250 times related to the election.<sup>13</sup> His Vkontakte page, meanwhile contains few updates and has a

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<sup>10</sup>Alexa Web Information. <http://www.alexa.com/siteinfo/livejournal.com>. Accessed 22 July 2012.

<sup>11</sup>See, for example, Balmforth, Tom, "Russian Opposition "Likes" Facebook" Radio Free Europe/Radio Liberty. <http://www.rferl.org/content/russian-opposition-likes-facebook/24585388.html>. Accessed 22 July 2012.

<sup>12</sup>All statistics are as of 22 July 2012.

<sup>13</sup>See Figure 1 in the appendix.

mere 60 followers.<sup>14</sup> He has no page on Odnoklassniki or Moi Mir.

To take another example, prominent opposition journalist, Oleg Kashin, has an active Facebook page (non-public) with 1317 friends. Kashin was one of several high-profile opposition journalists who wrote extensively about electoral fraud during the elections. He has no pages on VKontakte, Moi Mir, or Odnoklassniki.

While quantitative data on how information is disseminated via Facebook is not available, data on Twitter has been analyzed. As studies have found, political discourse on Russian Twitter is dominated by elite nodes that disseminate links (Greene 2012). From March 2010-March 2011, tweets by Navalny, Kashin, Marina Litvinovich, and Anton Nossik were among the most popular opposition Twitter users.<sup>15</sup> These and other prominent users linked most frequently to independent news outlets such as slon.ru, Ekho Moscow, Vedomosti, newtimes.ru, Novaya Gazeta, and gazeta.ru.

It is not immediately evident why elite activists prefer Western social media platforms over domestic ones. After all, domestic platforms contain many more users, and, hence, a larger potential audience. Nonetheless, all evidence indicates that activists overwhelmingly chose to politicize Western outlets.

Some suggest that activists prefer Western outlets for purely idiosyncratic reasons. As Russian journalist Grigorii Asmolov has noted, “[The use of Facebook for organizing mass protests] probably is explained by the fact that the people who kick started it all—that is journalists, bloggers, and political activists in Moscow -- themselves actively use [Facebook] and slightly shun VKontakte for perhaps aesthetic reasons.”

Another reason that opposition activists may have eschewed domestic social media platforms has to do with ownership structure. In recent years, the Russian authorities have taken steps to limit Internet freedom through regulation and intimidation. A report by the AGORA Association, a Russian human rights organization, found that between 2008 and 2011, there were 22 attempts by federal and regional authorities to introduce new regulations on the Internet, 25 state-supported lawsuits related to political activism on the Internet, and 22 instances of criminal prosecution for political activism on the Internet.<sup>16</sup>

Given this, it is perhaps not surprising that opposition activity on social media sites attracted the attention of Russian authorities during the 2011-12 election cycle. But Russian authorities found it much easier to apply pressure to domestically owned new media. Over the

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<sup>14</sup> Since the elections Navalny has chosen to concentrate more attention on building his VKontakte presence.

<sup>15</sup> Pro-regime twitter users are also organized in clusters that center around certain nodes, particularly hashtags related to pro-Kremlin youth groups and leaders of United Russia’s youth wing, Young Guard. Greene (2012)

<sup>16</sup> Gainutdinov, D. and Chikov, P. (2011). *Threats to Internet Freedom in Russia, 2008-2011: An Independent Survey*. Agora Association Report.

course of 2011, Live Journal was brought down no less than 5 times by denial of service attacks. In December 2011, the site suffered a 10 day barrage of attacks that took the site offline for much of election day, and sporadically thereafter. On December 9, four days after the elections, VKontakte's owner, Pavel Durov, was summoned by the Russian Federal Security Service (FSB) for questioning. On his Twitter feed, Durov displayed a copy of the summons and explained that FSB had requested that VKontakte close several anti-regime user groups on the site.<sup>17</sup>

Thus, opposition activists (and everyday users) had good reason to believe that their private communications could be compromised and their posts blocked if they utilized domestic social media outlets. A report by the Interfax news agency summed up the distinction between Western and domestic new media this way:

First, the websites of many major informational resources went down. Then, after the bulwark of Russian democratic thought, Live Journal, was hacked, jokes started to circulate in Facebook about when the hackers would bring down that final stronghold of free speech. But the stronghold held out and successfully aggregated hundreds of Twitter messages, YouTube videos, and links about the elections. Photos poured in. Commentaries were written. Users with thousands of followers posted information in their accounts about violations.<sup>18</sup>

Whatever the reason, Russian opposition activists put more effort into disseminating information about electoral fraud on Facebook and Twitter than they did on domestic platforms. Thus, following on our argument that users of politicized social networks will be more likely to demonstrate awareness of electoral fraud, our first two hypotheses are the following:

*H1: Usage of Facebook and Twitter will have a positive effect on awareness of electoral fraud.*

*H2: Usage of Russia's domestic social networking platforms will have no effect on awareness of electoral fraud.*

Our third hypothesis also derives from our argument about the conditions under which social media platforms will be primed with information about electoral fraud. As we argue, when press

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<sup>17</sup>[http://www.gazeta.ru/news/lastnews/2011/12/09/n\\_2129114.shtml](http://www.gazeta.ru/news/lastnews/2011/12/09/n_2129114.shtml)

<sup>18</sup> "V Facebook i Twitter pobedila demokratiya" Interfax. 5 December 2011.  
<http://interfax.ru/politics/txt.asp?id=220139>

freedom is high, there is more second-hand information available for elite activists to use in their social media posts. This makes it more likely that elite activists will have the ‘tools’ to be able to politicize social media outlets. Thus, our third hypothesis is the following.

*H3: The effect of online social media usage on awareness of electoral fraud will be higher in those Russian regions with higher levels of press freedom.*

## **Data and Methods**

The main data source that we use for testing our hypotheses is a representative survey of 1600 Russians conducted by the Levada Center from December 16-20, 2011.<sup>19</sup> Our dependent variable comes from responses to a question about awareness of electoral fraud, phrased in the following way: “Do you think there were violations in the counting of ballots during these elections, and, if so, how significant were they?” Respondents were offered four options: no violations (16%), insignificant violations (39%), somewhat significant violations that did not affect the final results (25%), and significant violations that affected the results (19%). From this, we construct an ordinal dependent variable ranging from 1 if a respondent thought there were no violations to 4 if the respondent thought there were significant violations that affected the results. This survey question makes a good dependent variable because it focuses specifically on awareness of falsification that occurred on election day and not on general attitudes toward the regime or the fairness of the elections.

Our main independent variables are constructed from the aforementioned question about respondents’ usage of various online social media platforms (see Table 1). It is worth emphasizing that this question asks respondents if they regularly use these sites, and not simply if they are registered. This is preferable for our purposes because users must actually log on and engage with social media platforms if they are to have any effect on awareness. *Twitter and/or Facebook User* is an ordinal variable equal to 2 if the respondent used both Twitter and Facebook, 1 if the respondent used either, and 0 if the respondent used neither. In various models, we also include a series of dummy variables, each equal to 1 if the respondent reported using, *Facebook*, *Twitter*, *LiveJournal*, *Vkontakte*, *Odnoklassniki*, *MoiKrug*, or *MoiMir*. Appendix Table 1 shows the exact wordings of the survey questions used in the models and shows how each variable is coded.

We control for a series of individual level factors that could both determine perceptions of

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<sup>19</sup> The Levada Center conducts its monthly Omnibus (or Courier) survey from 1600 residents in 130 primary sampling units across 45 regions. Interviewers conducted face to face in the home of the respondent and ask a variety of questions on contemporary social, economic and political issues. The margin of error is less than 3.4 percent. For details on the survey design in Russian, see <http://www.levada.ru/omnibusnyi-opros>

electoral fraud *and* be correlated with social media usage patterns. First, we include several variables that control for the political disposition and engagement of respondents: 1) whether the respondent supported Vladimir Putin (*Putin Approval*), 2) whether the respondent was affiliated with an opposition party (*Opposition Supporter*), 3) whether the respondent voted (*Voted in December Election*), and 4) whether the respondent participated in mass political action in the month before the election (*Participated in Political Action*).<sup>20</sup> Second, we control for the respondent's exposure to other media with a dummy variable equal to one if the respondent reported using the Internet and a dummy variable equal to one if the respondent reported consuming foreign media at all. The latter taps the respondent's exposure to Western media reports on the elections, which generally emphasized fraud. Moreover, including foreign media consumption is an indirect way of measuring an individual's ties to the West, such as language skills (we presume foreign media is in the English language); this variable helps us control for self selection into Facebook and Twitter. Finally, we control for a series of demographic characteristics that might determine perceptions of electoral fraud: These include a dummy variable for whether the respondent *Lives in Moscow or St. Petersburg*, the *Size of Settlement* where the respondent lives, *Household Income (Logged)*, *Age*, *Level of Education*, as well as whether the respondent is *Employed*, *Male*, and *Unmarried*.

The dependent variable is an ordinal variable, so we use ordinal logit models throughout. Robust standard errors are clustered on the primary sampling unit. Robustness checks showing results with fixed effects at the level of the primary sampling unit are shown in the appendix.

## Results

The results of our models related to Hypotheses 1 and 2 are in Table 2. As Model 1 shows, Facebook/Twitter are significantly more likely to believe that there were significant electoral violations in the 2011 elections. Coefficients show average marginal effects, denoting the increase in the predicted probability that a respondent chose option #4—Significant violations that affected the results—associated with a one-unit increase in a given independent variable.<sup>21</sup> The marginal effect of *Twitter and/or Facebook User* is .04. In other words, a one unit increase in that *Twitter and/or Facebook User* (i.e the difference between a respondent who uses neither Facebook nor Twitter and a respondent who uses one of these *or* the difference between a user who uses one of the two and a respondent who uses both) increases the probability that a respondent will think that electoral violations were significant and affected the results by 4 percentage points. Thus, a two unit increase increases the probability of a respondent perceiving

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<sup>20</sup> *Putin Approval* is not constructed from the same question as *Opposition Supporter* (See Appendix).

<sup>21</sup> See Hammer and Kalkan (2012) and the appendix for more on average marginal effects.

significant violations by over 8 percentage points.

Table 3 gives a better sense of the *scale* of these effects and shows the predicted probabilities accompanying this model. According to the model, respondents that use neither Facebook nor Twitter have an 18% chance of thinking that electoral violations were significant and consequential, while respondents who use both social networks have a 27% chance of thinking that violations were significant and consequential. In other words, using both Facebook and Twitter increases the chances that a respondent will believe that there was serious fraud by over 50% (an 8 percentage point increase). This indicates support for Hypothesis 1.

Table 2: Determinants of Electoral Fraud Awareness

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model	(7) Model	(8) Model	(9) Model	(10) Model	(11) Model
Male	0.01 (0.01)	0.00 (0.02)	-0.01 (0.01)	0.07** (0.03)							
Age	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)								
Household Income (Logged)	-0.01** (0.00)	-0.00 (0.00)	-0.01** (0.00)	0.00 (0.01)							
Size of Settlement	-0.00 (0.01)	-0.01 (0.01)	-0.00 (0.00)	-0.00 (0.02)							
Unmarried	-0.02 (0.02)	-0.02 (0.01)	-0.02 (0.02)	-0.02 (0.02)	-0.02 (0.02)	-0.02 (0.02)	-0.02 (0.02)	-0.02 (0.02)	-0.00 (0.02)	-0.01 (0.01)	-0.07* (0.04)
Level of Education	0.00 (0.00)	-0.00 (0.01)	0.00 (0.00)	0.01 (0.01)							
Internet User	0.04** (0.02)	0.05*** (0.02)	0.05*** (0.02)	0.05*** (0.02)	0.04** (0.02)	0.04** (0.02)	0.04** (0.02)	0.05*** (0.02)		0.02* (0.01)	0.08* (0.04)
Employed	0.02 (0.02)	0.01 (0.02)	0.02 (0.02)	0.02 (0.02)	0.02 (0.02)	0.02 (0.02)	0.02 (0.02)	0.02 (0.02)	0.04 (0.04)	0.02 (0.01)	-0.01 (0.07)
Consumer of Foreign Media	-0.00 (0.03)	0.00 (0.03)	-0.00 (0.02)	-0.00 (0.02)	-0.00 (0.02)	-0.00 (0.03)	-0.00 (0.02)	-0.00 (0.02)	-0.03 (0.03)	-0.03 (0.02)	0.07** (0.03)
Voted in December Election	0.09*** (0.02)	0.08*** (0.02)	0.08*** (0.02)	0.08*** (0.02)	0.09*** (0.02)	0.09*** (0.02)	0.09*** (0.02)	0.08*** (0.02)	0.05 (0.04)	0.07*** (0.02)	0.04 (0.05)
Putin Approval	-0.16*** (0.03)	-0.18*** (0.04)									
Nonpartisan	0.15*** (0.03)	0.15*** (0.03)	0.14*** (0.03)	0.15*** (0.03)	0.15*** (0.03)	0.15*** (0.03)	0.15*** (0.03)	0.15*** (0.03)	0.19*** (0.04)	0.08*** (0.02)	0.37*** (0.10)
Opposition Supporter	0.18*** (0.04)	0.22*** (0.05)	0.12*** (0.03)	0.33*** (0.11)							
Participated in Political Action	-0.00 (0.02)	-0.00 (0.02)	-0.01 (0.02)	-0.00 (0.02)	-0.00 (0.02)	-0.00 (0.02)	-0.00 (0.02)	-0.00 (0.02)	-0.02 (0.03)	-0.02 (0.01)	0.01 (0.03)
Lives in Moscow or St. Petersburg	0.09*** (0.02)	0.10*** (0.03)	0.04*** (0.01)	0.22*** (0.07)							
Twitter and/or Facebook User	0.04*** (0.02)								0.05** (0.02)	0.03** (0.01)	0.03 (0.04)
Vkontakte User		-0.03 (0.02)									
Moi Mir User			-0.04 (0.04)								
Odnoklassniki User				-0.01 (0.02)							
LiveJournal User					0.04 (0.04)						
Facebook User						0.05** (0.02)					
Twitter User							0.06* (0.03)				
User of Any Social Network								-0.02 (0.02)			
Observations	1213	1213	1213	1213	1213	1213	1213	1213	486	725	488

Standard errors in parentheses and clustered on Primary Sample Unit; \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$   
 Dependent Variable: Awareness of Electoral Fraud (Ordinal Logit); Marginal effects presented (Outcome==4).  
 Models 1-8: Different variables used to indicate social media usage. Model 9: Sample restricted to only users of online social media.  
 Model 10: Sample restricted to Putin supporters. Models 11: Sample restricted to Putin non-supporters.

Just as importantly, the stair step models 2-8 show that no other networks aside from *Facebook* and *Twitter* have any statistically or substantively significant effect on awareness of electoral fraud.<sup>22</sup> This indicates support for Hypothesis 2.

<sup>22</sup> In model not shown, we also examine the effect of *MoiKrug* and find that it has no effect.

**Table 3: Predicted Probability of Electoral Fraud Awareness**

	<b>No Violations</b>	<b>Insig. Violations</b>	<b>Violations, but did not affect results</b>	<b>Significant violations that affected results</b>
<i>Twitter and/or Facebook User (Model 1)</i>				
Does not use Facebook or Twitter	0.16[0.13-0.19]	0.39[0.34-0.44]	0.26[0.24-0.28]	0.18[0.148-0.215]
Uses Facebook or Twitter	0.13[0.32-0.41]	0.37[0.32-0.41]	0.28[0.26-0.31]	0.22[0.17-0.26]
Uses Facebook and Twitter	0.10[0.05-0.15]	0.33[0.27-0.39]	0.29[0.26-0.33]	0.27[0.19-0.36]
<i>Facebook User (Model 7)</i>				
Does not use Facebook	0.16[0.13-0.19]	0.39[0.34-0.44]	0.26[0.24-0.28]	0.18[0.15-0.22]
Uses Facebook	0.12[0.07-0.17]	0.36[0.31-0.41]	0.28[0.26-0.31]	0.23[0.17-0.30]

By contrast, as Models 6 and 7 show, users of Facebook and Twitter were significantly more likely to think that there were significant and consequential electoral violations. The effect of Twitter is largest, but given the low numbers of people who use Twitter, the standard error is also somewhat large. As Tables 1 and 3 confirm, a one unit increase in using *Facebook* increases the probability that a respondent will perceive significant violations by 4 percentage points. Put differently, using Facebook results in a 27% increase in the probability that a respondent thought there was serious fraud.

Model 9 restricts the sample to users of online social media in order to directly compare users of Facebook/Twitter to other social network users. The findings are the same; users of

Facebook/ Twitter are significantly more likely to believe that there were serious electoral violations. Among social network users, a respondent who uses Facebook and Twitter is 10 percentage points (55%) more likely to think that there was serious fraud.

Results on other variables are also of note. Internet users were more likely to think that fraud was serious, as were those who voted in the December election, and those who did not approve of the job that Vladimir Putin was doing as prime minister. Even when controlling for these factors, both opposition supporters and non-partisan respondents were much more likely than United Russia supporters to think that there was fraud.

Denizens of Russia's metropolises, Moscow and St. Petersburg, were more likely to think there was fraud. Perhaps surprisingly, wealthier households were, *ceteris paribus*, actually less likely to think that fraud was serious. Other demographic factors exerted no effect on the probability of perceiving electoral fraud.<sup>23</sup>

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<sup>23</sup> In the supplementary appendix to this paper, we carry out several other robustness checks including models using alternative dependent variables, models with fixed effects, models with alternative ways of coding our main independent variables, and models that drop Moscow and St. Petersburg.

Table 4: Conditional Effect of Online Social Media

	(1) Model	(2) Model	(3) Model
Male	0.03 (0.04)	0.00 (0.02)	0.01 (0.03)
Age	0.00* (0.00)	0.00 (0.00)	-0.00 (0.00)
Household Income (Logged)	-0.01 (0.01)	-0.00 (0.00)	-0.01** (0.01)
Unmarried	-0.06* (0.03)	-0.02 (0.02)	-0.02 (0.03)
Level of Education	-0.00 (0.01)	0.00 (0.01)	0.00 (0.01)
Size of Settlement	0.01 (0.02)	-0.01*** (0.00)	-0.00 (0.02)
Internet User	0.08** (0.04)	0.04* (0.02)	-0.01 (0.03)
Employed	0.03 (0.06)	0.00 (0.03)	0.01 (0.04)
Consumer of Foreign Media	0.05 (0.04)	-0.02 (0.03)	-0.02 (0.05)
Voted in December Election	0.08*** (0.03)	0.10*** (0.03)	0.03 (0.03)
Putin Approval	-0.18*** (0.06)	-0.15*** (0.03)	-0.14*** (0.05)
Nonpartisan	0.13 (0.08)	0.13*** (0.03)	0.15*** (0.05)
Opposition Supporter	0.15 (0.10)	0.17*** (0.04)	0.15*** (0.04)
Participated in Political Action	-0.05 (0.06)	-0.03 (0.02)	0.04 (0.02)
Lives in Moscow or St. Petersburg	0.00 (.)	-0.09 (0.09)	0.25 (0.28)
Regional GRP (logged)	-0.04 (0.08)	0.03 (0.03)	0.08*** (0.03)
UR Vote Percentage 2011 (Regional)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Percentage with Higher Ed (Reg.)	0.01 (0.02)	0.00 (0.00)	-0.01 (0.01)
Twitter and/or Facebook User	0.03 (0.05)	0.04** (0.02)	0.12* (0.07)
Observations	224	686	286

Marginal effects; Standard errors in parentheses

Dependent Variable : Awareness of Electoral Fraud (Ordinal Logit).

Model 1: Sample restricted to regions with press freedom score 'Not Free'

Model 2: Sample restricted to regions with press freedom score 'Somewhat Not Free'

Model 3: Sample restricted to regions with press freedom score 'Somewhat Free'

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Hypothesis 3 stated that the effect of online social media usage would be higher in regions with higher levels of press freedom, because, in these regions, there are some outside sources of information that elite opinion leaders can use to prime social networks with information about

fraud. Table 4 shows the average marginal effects from models that bear out this hypothesis. Model 1 shows the results from our main model for regions with low levels of *Press Freedom*, while Model 2 shows the results in regions with middle levels of *Press Freedom* and Model 3 shows results in regions with relatively high levels of *Press Freedom*. The effect of Twitter/Facebook usage is statistically insignificant in regions with low press freedom, while in regions with middle levels of Press Freedom, the effect of *Twitter and/or Facebook User* is positive, significant, and substantively similar to that found in the pooled sample. Finally, in regions with relatively high levels of *Press Freedom*, the effect of Facebook/Twitter usage is more than three times as large as in regions with low *Press Freedom*.<sup>24</sup> In other words, using Facebook/Twitter increases a respondent's awareness of fraud more in regions with relatively free press. These results indicate support for our hypothesis that the effect of online social media usage on awareness of electoral fraud is conditioned by the openness of the broader informational environment inhabited by elite users that prime the social networks with information on fraud.

### **A Word about Endogeneity**

No observational research design can fully eliminate endogeneity concerns. Ours is no exception. In our case, the concern is that people with preformed opinions about electoral violations select into usage of Facebook and Twitter and eschew usage of native social media platforms. It could then be possible that Facebook and Twitter have no independent effect on increasing awareness of electoral fraud; users of these services already have opinions about the prevalence of fraud. Theoretically, we believe there are good reasons to think that the direction of causality does run from Facebook/Twitter usage to awareness of fraud. Even if Russians do select into Facebook/Twitter with preconceived notions about electoral fraud and subsequently spread information about fraud through those channels, it stands to reason that a person with no preconceived notions about electoral fraud will have a higher chance of becoming exposed to information about electoral fraud if they are a Facebook user than if they are a V Kontakte user. After all, we know from the qualitative accounts cited above that information about fraud was widely disseminated on Facebook/Twitter, but not on V Kontakte.

Empirically, we do several things to probe the nature of causality in this relationship. First, treating this issue as an omitted variable problem, we have controlled for those factors that might determine people's pre-conceived notions about electoral fraud, including their views of the current regime, level of education, access to alternative sources of information, and levels of

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<sup>24</sup> We present three split-sample models here to ease exposition. All results are the same using interaction terms or multi-level models.

political engagement. Even while holding these factors constant, we find that usage of Facebook and Twitter has a significant positive effect on awareness of fraud.

In order to investigate the possibility of self-selection in greater detail, we split our sample into two groups, those who indicated that they supported Vladimir Putin (1,004 respondents) and those that did not (596 respondents). Those who oppose Putin are more likely to have preconceived views about the incidence of fraud, (indeed 68% thought that there were significant or somewhat significant violations [categories 3 and 4 on *Electoral Violations*], so there should be less room for Facebook/Twitter to influence opinions about fraud. Many of these individuals have already been exposed to information about fraud, and these are the type of individuals that should self-select into Facebook/Twitter with pre-conceived notions of fraud. By contrast, Putin supporters are less likely to have pre-conceived notions about fraud. If Facebook/Twitter has an independent effect on awareness of fraud and is not just a proxy for pre-conceived notions of fraud, then we would expect to see that Facebook/Twitter usage has a larger effect on awareness of fraud among Putin supporters. In Model 10, we run our base model using only the sample of Putin supporters and see that *Twitter and/or Facebook User* has a positive and statistically significant effect. In Model 11, we run the base model on the sample of Putin opponents and see that the marginal effect on *Twitter and/or Facebook User* is .03 and not statistically significant.<sup>25</sup> This indicates that the primary effect of Facebook/Twitter usage is to inform erstwhile regime supporters about fraud. It also increases awareness of fraud among regime opponents, but the effect is much smaller.

It is also worth pointing out that the findings in Table 4 support the perspective that usage of Facebook and Twitter drives awareness of electoral fraud. There is no reason to think that people with preconceived views on fraud would be more likely to select into Facebook and Twitter in regions with high press freedom than in regions with low press freedom. By contrast, if these networks must first be primed with information on fraud in order to affect users' perceptions of fraud, then we would expect to see the results that we find.

Finally, if those with preconceived views about fraud select into Facebook/Twitter, then usage of these networks can be taken as proxies for having preconceived ideas about the prevalence of fraud, and Facebook/Twitter usage should then predict other political positions that are associated with having preconceived views about the regime's electoral conduct. For example, those who support liberal opposition activist Alexei Navalny are likely to believe that fraud was extensive given that Navalny's public positions were founded on this premise. Thus, Facebook/Twitter usage should predict support for Navalny. We investigate this premise in

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<sup>25</sup> These split sample results are similar if we divide the sample using the *OppositionSupporters* variable. The results are also similar if we use *Facebook User* as the independent variable.

Appendix Table 5 in the appendix and find that it does not. Nor does Facebook/Twitter usage predict other liberal positions that are commonly associated with presumptions about widespread fraud. It does not predict support for opposition candidate Mikhail Prokhorov, lack of support for Vladimir Putin, vote for non-regime parties, or abstention during the elections. If Facebook/Twitter usage were simply a proxy for those with liberal views (such as the view that electoral fraud was extensive), then Facebook/Twitter usage should also predict liberal positions/actions. It does not. This combined with the fact that Facebook/Twitter usage is associated with awareness of fraud, indicates that usage of these social networks increased awareness of fraud. In sum, we acknowledge the potential for endogeneity in our empirical analysis, but the evidence at our disposal lends itself toward the interpretation that Facebook/Twitter usage increase awareness of fraud.

## **Conclusion**

There is no scholarly consensus about the effect of new media on politics in authoritarian regimes. This is because most scholars have tended to view new media as a ‘black box’, failing to distinguish among the different ways that new media is used. Most studies of new media in authoritarian regimes lack attention to the causal mechanisms that link specific types of new media usage to specific political outcomes. In this paper, we examined how a specific type of new media—online social networking sites—affects political awareness among citizens in authoritarian regimes. Because it lowers the cost of information acquisition, exposes users to unsought political information, and increases the perceived reliability of that information, online social media has the potential to increase political awareness in non-democracies. However, online social media usage only increases political awareness if the specific social network being used has been politicized to contain political information. Not all online social networks are politicized in this way.

Using original survey data from the Russian 2011-2012 election cycle, we showed that usage of *politicized* social networking platforms increased awareness of electoral fraud in the 2011 parliamentary elections. We find that usage of Facebook and Twitter, which were primed by opposition elites with information about electoral fraud, significantly increased the probability that respondents perceived significant electoral violations. By contrast, usage of Russia’s more popular native social networking platforms, Vkontakte, Odnoklassniki, MoiMir, and Moi Krug, had no effect on awareness of electoral fraud. These findings are robust to controlling for a range of factors that might also predict awareness of electoral fraud and be correlated with choice of social network. We also find that usage of Facebook/Twitter has a larger effect on awareness of electoral fraud in regions with relatively high levels of press

freedom. In order to have an effect on awareness of electoral fraud, these social networks must first be primed with information on such fraud. In regions with relatively high levels of press freedom, there is more secondary information about electoral fraud that elites can use to prime those networks.

Our findings demonstrate both the promise and limitation of online social media as a driver of political change in non-democracies. On the one hand, Facebook and Twitter do seem to increase political awareness in authoritarian regimes. In turn, increased awareness of government malfeasance turns more citizens against the regime and makes anti-regime mobilization more likely. In this way, dictators have reason to fear the rapid expansion of online social networking. At the same time, it is worth keeping in mind that even though usage of Facebook and Twitter is expanding rapidly around the globe, the share of voters in most electoral authoritarian regimes that actually use these networks is still quite low—only about 7% of Russian adults, for example. Thus, while the global spread of Facebook and Twitter has undermined and will continue to undermine the ability of authoritarian regimes to control information flows, the past and present effects of social networking on democratization should not be overstated.

What is more, in regimes such as Russia, China, Vietnam, and Iran, the user base of native social networking sites still dwarfs the user base of Facebook and Twitter. Authoritarian leaders are better able to control the spread of anti-regime information on these networks. The worldwide homogenization of social networking continues apace, but where native social networking platforms continue to dominate the social networking market, authoritarian leaders are likely to be more successful at blunting the democratizing effects of online social media.

Finally, our work has important implications for the determinants of anti-regime mobilization in authoritarian regimes. As studies of mass mobilization under autocracy demonstrate (Tucker 2006, Kuran 1989), opposition mobilization is most likely when citizens are aware that anti-regime grievances have become widespread. This knowledge of mutually shared grievances reduces both the perceived costs of collective action and the likelihood that citizens will ‘falsify’ their anti-regime preferences. This study highlights a mechanism by which knowledge of mutually shared anti-regime grievances can spread in modern authoritarian regimes.

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