A First Look at "Eyes on the Vote"

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ABSTRACT

Traditional election monitoring involves trained observers recruited and deployed by neutral organizations to complete structured reports based on their first-hand observations. In contrast, social media-based election monitoring takes as input the high volume, noisy data produced by individuals posting on social media outlets, with limited constraints and structure. Trained volunteers process this data in an effort to extract meaningful information. Both methods have been used successfully to support free and fair elections. In this work we begin to explore a middle ground, namely reports by untrained individuals, but mediated through a mobile phone application that provides structure for the responses. In collaboration with Pol-IT, a Buenos Aires based organization focused on politics and ICTs, we report on a first study of users of the Ojo con el Voto (Eyes on the Vote) application deployed during the Argentina presidential run-off election in November 2015. We expect that citizen apps for election monitoring will become increasingly popular, hence this early look at their use offers an opportunity to establish an initial baseline and to potentially influence subsequent development.

CCS Concepts

•Human-centered computing ~ Computer-supported cooperative work • Human-centered computing ~ Empirical studies in collaborative and social computing

Keywords

ICTD; e-democracy; election monitoring; mobile apps

1. INTRODUCTION

Election monitoring involves observation of election processes with the goal to report on irregularities that might affect the free and fair outcome of the election. The presence of monitoring may also serve as a deterrent to fraud. Formal election monitoring conducted by neutral third parties such as other countries and non-governmental organizations (NGOs) is now commonplace in fragile and emerging democracies, but also in long-established democracies.

In formal election monitoring, volunteers are trained and provided with structured checklists to use in reporting. Electronic versions of these lists are now in some use; the Carter Center's Electronic Monitoring (ELMO) system is one such example.

ICTD '16, June 3–6, 2016, Ann Arbor, Michigan, USA
ACM 978-1-4503-4306-0/16/06.
http://dx.doi.org/10.1145/2909609.2909623

(See http://getelmo.org). Formal monitoring has the advantage that the monitors are trained and hence their reports are generally considered reliable. However, practical constraints limit the size and geographic coverage of the formal observer pool.

The rise of social media has provided an opportunity for another approach to election monitoring, based on observing social media posts for election-related information. In social media monitoring, the input is the high volume, noisy data produced by individuals posting on social media outlets, without formal constraints or structure. Trained volunteers process this data in an effort to extract meaningful information. Social media-based monitoring has the potential advantage of wide spread geographic coverage and rich, unstructured information. These advantages come with the challenges of overwhelming data volume, uninteresting or irrelevant information, and unverified sources. Work by Smyth describes a social media-based monitoring platform and its use in multiple elections, along with comparison to formal election monitoring [7,8].

We are interested in a third approach that lies in a middle ground between formal monitoring and social media-based monitoring. The increasing availability of smartphones has made it possible to create monitoring applications for use by untrained individuals whose information is mediated through the structure of the application questions. Such a capability supports crowd-sourced monitoring that may enjoy the advantages of social media-based monitoring in terms of geographic coverage, large-scale participation and timeliness as well as the higher signal-to-noise ratio of formal monitoring. Naturally such an approach may also share the downsides of each alternative, as coverage is only as good as app uptake and veracity remains an issue.

To begin to understand the potential and limitations of citizen apps for election monitoring, we have partnered with a small company based in Buenos Aires that creates information technology (IT) systems that support political development. Pol-IT is a relatively new organization with technical and political expertise. They have developed the application Ojo con el Voto (Eyes on the Vote) for use by citizens on election day. Ojo con el Voto was used during the November 22, 2015 runoff presidential election in Argentina, after the three-way general election on October 22, 2015 did not produce a winner. We worked with Pol-IT to provide a link to an optional survey when a user submitted an app report. This note reports on our initial findings based on 367 survey responses.

Users of the application were recruited through information provided through traditional media such as print newspapers and social media. Our focus in this initial paper is the demographics and motivations of application users. Understanding who has used a citizen reporting app and why is critical to planning and

designing for app uptake and thus the potential for marshalling a substantial crowd to observe.

We find that participants are older and more are female than in the general population. This profile differs from the typical profile of a technology user (often young and male). Respondents cited multiple reasons for participation from a collective incentive to benefit society ("good for the country") to those who had a selective individual incentive and desire to participate in the election beyond just voting. Where possible we compare our findings to those studying participants in SMS-based election monitoring in Uganda in 2011 [3].

2. BACKGROUND AND RELATED WORK

Citizen participation in election monitoring takes place in two broad categories. In "bounded crowdsourcing" established civil society groups train and deploy their staff and volunteers to provide reporting that has enhances what formal monitors are already doing. In contrast, in "open crowdsourcing" participation in reporting is open to anyone. In practice participation is scoped by those who learn about the reporting opportunity and, in the case of technology-based systems, who have access to the technology used for reporting.

Within the open crowdsourcing category, SMS has been widely used as the reporting technology together with the Ushahidi platform (e.g., [6]). This technology choice makes sense given that SMS is available on basic mobile phones and does not require data plans or smartphone technology. Increasingly, however, smartphones and smartphone apps are becoming a viable option for citizen reporting in many locations. Apps have the potential to be easier to use than SMS, which requires free form and often tedious entry. Apps may also be less subject to entry errors, for example if the user simply needs to check a radio button rather than use a text-based grammar to structure replies.

Academic work studying open crowdsourcing is quite limited, and even more so when the focus is on the demographics, motivations and changes that take place for participants in open crowdsourcing. Yet, the National Democratic Institute (NDI), a major international NGO focused on elections and good governance, calls for more of this understanding, stating that "[t]here is a scarcity of data on specific demographic groups' use of, and barriers to technology for political participation." [4]. A notable exception to the limited academic work is the ICTD 2012 paper by Hellstrom and Karefelt examining users and non-users of SMS reporting during the Ugandan General Elections of 2011 [3]. One of their key findings is that citizens participating in monitoring via mobile phones are frequently not participating in other political arenas, hence open crowdsourcing may contribute to greater political participation and engagement.

The Ojo con el Voto app, created by Pol-IT, was developed for the Android platform, by far the dominant smartphone technology used in Argentina with a market share of 70% [techthoughts.net]. Pol IT developed the questions used in the app in collaboration with two major newspapers, Clarin and La Nacion. This meant there were two broadcast outlets for advertising the app and for displaying results on election day. Indeed, the La Nacion landing page prominently displayed a link to the Ojo con el Voto app and public dashboard during the election.

The Ojo con el Voto app asked four questions about voter experience including "was the secrecy of your ballot secured" and allowed reporting on 9 irregularity categories including "were there errors in the ballot" and "was there violence or security threats". Reports required a location and allowed detailed comments and photos. The app also automatically geo-located the reports for use in a map on the public dashboard. In total, 1602 reports were received. More than twice that many were received in the general (pre-runoff) election in October, with a total of 3606.

The types of questions asked by app users bear directly on how they understand the role they play in election monitoring and potentially on how their attitudes and behavior might be affected by participation. Towards this end, we conducted a comparison between the app questions and two standard international observer question sets. The UN Development Agency provides multipage questionnaires to formal observers that cover activities ranging from the setup of polls through accounting for ballots after polls close. The Election Day Poll Closing/Ballot Accounting instrument requires observers to supply 34 items of information, in addition to free-form comments. We developed categories for questions by iteratively building a category list while examining each of the three question sets.

Notable differences in the app question set as compared to formal monitoring include the absence of questions that would require day long and/or closing time visits to polling places, such as closing time, number of voters or tallying process. Most citizen responders would likely report on their own visit to the polls for voting, whatever time of day that might occur. Interestingly, opening on time is queried in the app.

Other election monitoring apps are beginning to appear, including Every Vote Counts for use in Nigeria, Kyeet for use in Myanmar and the E-Poll Agent System for use in Uganda in 2016. None of these apps have yet been studied from an academic perspective.

3. METHODS AND FINDINGS

3.1 Methods

In collaboration with Pol-IT we designed a survey for use by Ojo con el Voto users. Upon receipt of a report, the app invited users to take our survey. When following the survey link, users were first presented with study and consent information. If they consented, they were taken to the on-line survey. Within the survey we provided on optional opportunity for users to supply an email address or cell phone number to be used for follow up interviews. In this paper we focus on what was learned from the survey; future work will examine results from the follow-on interviews.

We did not attempt to survey non-users of the app. That would be possible as future work, though identifying random non-users for an app is not an easy task. The work by Hellstrom and Karefelt on non-users relied on a randomized sample of mobile phone users from two provider databases thus they queried users with access to SMS but who did not participate [3]. The non-users of interest to us would be those with the technological means to participate (namely Android smart phone users) but who did not, a more difficult group to identify since smart phone users cannot be easily identified just from most cell service provider databases.

Out of 1602 app reports, 367 users took our optional survey. There were about 30 responses that appeared to be duplicates, for a response rate of 21%. 30 users began but did not complete the survey. Of the 367 survey responders, 171 (47%) provided contact information for further follow up. The survey required additional time after using the app. The results may be skewed to those who were technologically comfortable, politically engaged and willing

to devote their time and the additional airtime cost to complete the survey.

The survey asked 4 demographic questions (age, gender, education level and occupation). In addition to demographic questions, participants were asked about their political beliefs and motivations for using the Ojo con el Voto application. The remaining eight survey questions used a five level Likert scale to probe attitudes and beliefs about elections, election monitoring and the app itself. The survey questions were originally drafted in English. They were reviewed and modified in collaboration with Pol-IT and translated to Spanish by Pol-IT staff.

3.2 Findings

With respect to demographics, 70% of responses came from people over the age of 40, with 50-59 as the most common age range (29%) followed by 40-49 (23%). The voting age in Argentina is 16 years, and 3% of our respondents were between 16 and 17 years old. The gender distribution was 54% female and 46% male with more imbalance at older age ranges (e.g., more than 60% female for age 50 and above). This gender imbalance with age is consistent with overall Argentina population demographics. Over 70% of respondents had some post-secondary education and roughly 45% reported completing university. No single occupation dominated; education, health, technology and services were all selected by 10-14% of respondents; "other" was chosen by 24.9% and dominant in the 60+ age range where respondents are more likely to be retired.

The survey included one free form question that asked users "how would you describe your political opinions?" A vast majority of respondents did not mention affiliation with a specific political party. Many identified specifically as independent, a reference to philosophy not party. Because this election was an opportunity to end the 12-year reign of one specific political party, many respondents chose to write about their desire for change. Another important theme in responses was a general enthusiasm for democracy and democratic values.

A credible goal for crowd sourced election monitoring is to improve the reality and/or perception that elections are free and fair. Most participants agreed or strongly agreed with the statement "I think elections are free and fair" with 35% agree and 27% strongly agree. Just over 18% neither agreed nor disagreed, while roughly 20% disagreed or strongly disagreed. The percentage of respondents that disagree or strongly disagree (i..e., do not believe elections are free and fair) tends to increase with age until the 60+ range is reached when it decreases.

A challenge of open crowd sourced monitoring is getting the word out to potential participants. We asked how users heard about the app. Social media was the most common response at 40%, followed by print media at 21%, however 29% of users selected "other". Another traditional form of media, radio, was cited by 5% of respondents, while another form of electronic outreach, email, was cited by under 2%. Friends and colleagues were selected by fewer than 3% of respondents. The survey also asked whether respondents invited someone else to use the app. Just over half did so (55%).

When asked about their motivation to participate, respondents could choose all that applied from five options. Most common were "Because I believe technology can help in election observation" (54%) and "Because I want to collaborate and participate in elections beyond voting" (48%). Roughly one-fourth of respondents chose "Because I am concerned about the outcome of the election" (27%) and "Because I enjoy new technology" (22%). The least frequently selected option was "Because I am involved in an organization that supports elections" (4.5%). A separate Likert scale question stated "I am involved in politics" with options ranging from strongly disagree to strongly agree. The majority were neutral (36%) or agreed (34%).

Several questions asked about the importance of informal election monitoring on its own and in comparison to formal election monitoring. In response to the statement "Crowdsourced monitoring is good for the country", 77% strongly agreed, and 17% agreed. Just over 1% disagreed or disagreed strongly. When asked about whether informal election monitoring is better than formal monitoring, more than half of respondents neither agreed nor disagreed. Thirty-seven percent agreed or strongly agreed, while just 12% disagreed or strongly disagreed.

Finally, while we do not have a comparison to non-users, those in our survey reported being comfortable with technology (87% agreed or strongly agreed) and finding the app easy to use (97% agreed or strongly agreed).

4. DISCUSSION

4.1 Participant Profile

The age distribution of participants runs counter to overall population demographics in Argentina. Our user pool contains many more older respondents than would be expected by population representation. One reason for this may be the longer memories and more diverse experiences with past governments of those 40 and over, who can remember prior to the 12-year incumbent party reign. The data on beliefs that elections are free and fair may provide another reason for older voter participation; these users were more likely to disagree that elections are free and fair, until the 60+ age range was reached.

The gender distribution is consistent with overall population demographics, but when taken together with the age distribution represents the opposite of the oft-presumed young and male technology user. While a bit dated, a 2010 PEW Global Attitudes Study indicates that gender gaps in Internet usage are non-existent in Argentina (and in many other countries), while age gaps persist in cell phone and Internet usage [5], thus our skewed age is interesting. Unfortunately the Uganda study does not report on age or gender statistics of UgandaWatch users, so we have no comparison point to another open crowdsourcing user study.

4.2 Participation Incentives

We follow Hellstrom and Kareflt [3] in examining incentives to participate given the "paradox of participation" which predicts that citizens will not participate given the low likelihood of making an impact [1]. Two types of incentives encourage participation despite the participation paradox. Collective incentives refer to a belief that one's participation (with others) will make an important difference. Selective incentives refer to an advantage accrued to the individual regardless of the outcome of participation [1,2]. Not all incentives neatly fit into one category or the other.

When we examine reasons to participate as reported by survey respondents, we find that both collective incentives and selective incentives seem to be in play. The belief that technology can help in election observation and that crowd sourced election monitoring is good for the country are both examples of collective incentives – something of broad value will happen due to participation. On the other hand, a desire to collaborate and participate beyond voting and the enjoyment of new technologies

are examples of selective incentives. One can view use of the app as participation, regardless of impact; use of new technologies also takes place regardless of whether the app has an impact.

4.3 Country Comparisons

Argentina in 2015 differs from Uganda in 2011 on many measures, hence it is not surprising that the results most directly comparable between the two studies diverge. On the issue of how participants learned of the opportunity, the Uganda study found that radio was by far the most common means. The situation in Argentina was quite different, with social media as the most common method of hearing about the app. Both countries saw print media as a valuable channel. Anecdotally, Pol-IT staff report that app downloads increased when credible opposition candidates began to mention the app and encourage people to use it to report incidents.

In Uganda most respondents reported that they were not involved in politics, while nearly half of Argentina respondents said they were. Argentina respondents were not likely, however, to report being part of an organization interested in elections, so their political involvement is coming via other means. It is not clear whether app availability increased political equality in Argentina as the Uganda study authors suggest happened there.

The reasons to participate in Argentina included those that might be comparable to the "help my country" answer given most often in Uganda, such as "can help in election observation" and "is good for the country". In Uganda the second most common reason was "to get help", a sentiment not reflected in any of the Argentina choices. While the Argentina election was contentious, and there was some recent history of election day violence from August 2015, that violence was isolated geographically and both the general and run-off presidential elections were largely peaceful.

The Ojo con el Voto app was also deployed in Venezuela for their parliamentary elections of December 2015. The in-country connections and relationships were much weaker than in Argentina, and the lead time to get the word out about the app was just a few days. There were 170 uses of the app, which was mostly advertised via twitter. Interestingly, none of the app users opted to take the survey. Possibly users trusted the app and by association the survey process more in Argentina where the channels to learn about it included print media and social media. The Venezuelan context is also more prone to violence, so citizens may have had more reasons to fear participation. Surveys and interviews with non-users would be necessary to better understand why participation in the survey differed so dramatically in the two countries.

4.4 Larger Election Context

Pol-IT has developed a suite of apps for use in election contexts. In the Argentina presidential election they deployed an app for use in real-time during the debate between the run-off candidates one week prior to the runoff election. They also developed an app for use by poll workers to report on election results more quickly than the traditional election result gathering process.

These additional apps suggest a broader opportunity for technology to play a role in citizen discussions around elections and in improved transparency. The debate results and the Ojo con el Voto reports were available for public view and comment in real time via the web. Anecdotally more than 22,000 people worldwide contributed comments as part of the debate coverage. The availability of reports from poll workers with photos of the vote certification document have the potential to remove a source of fraud, namely tampering with vote counts during the centralized counting process.

5. CONCLUSIONS AND FUTURE WORK

Many of the conjectures we have made about participation and its impacts on individuals call for qualitative work to augment our surveys. We are in the process of conducting interviews.

Our initial evaluation of comments on political opinions suggests that even in established democracies, citizens are eager for more engagement. That includes keeping an eye on the electoral process, even if (or perhaps especially if) international monitors do not participate. Open crowdsourcing may provide a cost effective and scalable method for observation. When combined with partnerships in the trusted press and real-time display of information, citizen reporting has the potential for impact.

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