

## 9

### Popular Election Monitoring

#### *How Technology Can Enable Citizen Participation in Election Administration<sup>1</sup>*

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#### INTRODUCTION

In just the past few years, “crowd sourcing” – highly decentralized monitoring and information processing – has emerged as an important technique. Private sector and civic entrepreneurs have developed numerous Internet-based platforms to elicit information and utilize those data to construct knowledge that would otherwise be more costly or less trustworthy. Wikipedia, “a free encyclopedia that anyone can edit,” is perhaps the most prominent of these efforts. Similar approaches are used to produce reviews and ratings of books, movies, hotels, disease, and many consumer products.<sup>2</sup>

Crowd-sourcing approaches have also been applied to develop knowledge in the natural and medical sciences. In ornithology, for example, the 2009 *State of the Birds* reports the status of bird populations in the United States based on professional monitoring databases and tens of thousands of “citizen-scientists” who file their own observations.<sup>3</sup> Google has developed an algorithm to track patterns of influenza infection all over the world based on analysis of Internet users’ search behavior.<sup>4</sup> For the United States, Google Flu Trends indicators track flu indicators produced by the Centers for Disease Control and Prevention (CDC) very closely. Google results have the advantage of being available two weeks before CDC data.<sup>5</sup>

Though policy makers and social scientists have been slower to exploit the possibilities of crowd-sourced monitoring, several innovations have emerged. A nongovernmental organization called Ushahidi, for example, has developed a crowd-sourced crisis reporting system that has been used to track incidents of post-election violence in Kenya, violence in the Gaza Strip, and most recently highly localized needs in the 2010 Haiti earthquake.<sup>6</sup> Less dramatically, other crowd-sourcing platforms allow urban residents to document, report, and visualize neighborhood problems such as broken traffic lights, potholes, and vandalism.<sup>7</sup>

These developments in information technology and crowd-sourcing methods have the potential to improve the quality of election monitoring by complementing existing approaches. As with bird migration and the formation of potholes in large cities, the reality of elections in the United States and elsewhere is the sum of processes that unfold in tens of thousands of far-flung places.

In the United States, the problem of ensuring that polls are open and accessible on election day is compounded by the extensive decentralization of election administration. But even if, as some election reform advocates argue, election administration were to become centralized in a single federal agency, the problem of ascertaining the facts-on-the-ground on election day would remain daunting. The resources required to observe every polling place in a large country like the United States exceed the grasp of any imaginable electoral regulatory body. Consequently, it is difficult to know exactly how fair and open any particular election really is, much less respond to problems on election day. This chapter examines the potential for popular, crowd-sourced monitoring methods to improve the fairness of political elections. In the 2008 U.S. presidential elections, several organizations fielded experimental projects in this type of monitoring. A survey of those experiences reveals attractions and potential drawbacks of such systems. It raises important questions regarding how this method might be used and improved in the future.

#### THE POTENTIAL OF POPULAR ELECTION MONITORING

There are two general reasons to pursue popular election monitoring in the United States in the future: because it is “cool” and because there are reasons to think that it can work well.<sup>8</sup>

By cool, I mean that popular election monitoring utilizes an increasingly common social practice of content creation through large-scale user input. Many people, especially the young and tech-savvy, have come to find peer-provided and widely sourced information entertaining, engaging, and occasionally informative. Examples include video production and sharing through YouTube, Amazon.com book ratings, flyertalk.com or tripadvisor.com sharing of travel and airline rankings and reviews, IMDb.com movie ratings, flickr photo sharing, and Facebook.com.

Election administration and regulation, on the other hand, ~~generally~~ is far from cool. Introducing crowd-sourced popular participation may make the issue more appealing and understandable to many citizens, help educate them about the importance and dimensions of the problem, engage them in efforts to address it, and increase the attention of journalists and public officials.

Popular election monitoring also has the potential to improve the quality and scope of election administration in several ways:

*Monitoring capacity* would be dramatically expanded by inviting anyone who cares to issue a report to do so. It would aim not just to randomly or strategically

sample polling places, but to generate multiple reports about every polling place in the country. For very little investment, TwitterVoteReport produced some 12,000 observations. With moderate advertising, almost 100,000 people called in to the CNN problem hotline. These numbers could be much larger with the support of government and other major media organizations.

*Real time.* Data generated by popular election are available in real time rather than being stored in reports issued weeks or months later. Such real-time **access** enables responses to problems as they develop. Media audiences are also much more easily engaged through real-time data, on election day, rather than follow-up studies.

*Civic engagement.* Currently, citizens participate in elections by casting a vote (or attempting to). Popular election monitoring allows them to participate also by sharing their experiences, observations, and assessments in engaging and entertaining ways.

*Legitimacy.* Properly implemented, popular election monitoring can have greater legitimacy as a trusted source for some audiences who perceive reports from NGOs, political campaigns, and even some professional media to be flawed. One clear objection is that the quality of reports in popular election monitoring is inevitably uneven. Still, some people prefer Amazon.com ratings to consumer reports, and vice versa.

*Vivid depictions in an updated medium.* Data generated by popular election monitoring can be very vivid – not just text but also pictures and videos. Popular election monitoring platforms can depict the election using maps, pictures, videos, and text for contemporary news hounds, politicians, and other citizens. Display will only improve in the future.

*Transparent analysis and accessibility.* Once reports are collected, data gathered by popular election monitoring can be made available for anyone to analyze in any way they like. To the extent there is hand waving in any interpretive exercise of assessment, others can easily check and verify.

*Benchmarking best practices, levels of voter satisfaction.* Popular election monitoring will allow electoral reform groups, election officials, and citizens themselves to compare the levels of satisfaction and the problems encountered across states and counties with very different voting schemes. These constructive comparisons may help identify best practices that should be more generally adopted.

#### POPULAR ELECTION MONITORING IN THE 2008 ELECTIONS

Let us define popular, or crowd-sourced, election monitoring as a system in which:

1. Any individual can
2. register an observation about an election and
3. that observation is pooled with other individuals' observations

Project	Organization	Total Reports
<i>TwitterVoteReport</i>	TechPresident, National Public Radio, large coalition	12,000
<i>CNN Voter Hotline</i>	CNN	96,351
<i>OutVoteLive</i>	Election Protection	10,428
<i>MyFairElection</i>	Author, Russell Richardson, ABC News	1,824
<i>Polling Place Photo Project (2006 &amp; 2008 election)</i>	New York Times	6,000
<i>Video the Vote</i>	YouTube	1,022

FIGURE 9.1. Participation in 2008 Popular Election-Monitoring Projects

4. to create a public depiction of the reality of the election
5. that is offered back to the public and to election officials in real-time on election day.

~~Based on~~ this definition, there were many crowd-sourced projects in the 2008 elections. The largest of these was probably [twiterrvotereport.com](#).<sup>9</sup> The effort, led by TechPresident and joined by many others, allowed individuals to report voting problems through the twitter communication platform and then displayed the most recent of those reports on Google Maps. The twitter project was implemented in conjunction with National Public Radio (NPR). The author of this chapter worked with San Francisco developer Russell Richardson to create [MyFairElection.com](#) – which is described more extensively below.

The Cable News Network (CNN) operated a problem-reporting hotline and then displayed reported problems on a map on its website.<sup>10</sup> Election Protection operated [OurVoteLive](#),<sup>11</sup> which collected reports from its field observers and hotline and then displayed those reports on an electronic map. Several projects, such as YouTube's [VideoTheVote](#) and the *New York Times* Polling Place Photo Project, used crowd sourcing to create a more qualitative and entertaining picture of the election.

Figure 9.1 shows these projects and the number of reports submitted to them in the 2008 elections.

#### MYFAIRELECTION.COM

As of this writing, I did not have access to data from other crowd-sourced election-monitoring projects. Therefore, I will use [MyFairElection.com](#)<sup>12</sup> as a brief case illustration of how popular election monitoring can operate and describe the picture of the election that emerged from this monitoring effort.

#### BASIC CONSTRUCTION AND DESIGN

I initially developed the concept for MyFairElection.com in July 2008. Software engineer Russell Richardson offered to develop the software platform in early September 2008. The platform was fully functional by October, in time for Election Day. Conceptual and engineering labor was provided *gratis*. The only substantial cost was hosting. ABC News provided funds of approximately \$10,000 for EngineYard.com, a very-high-bandwidth Internet service provider (ISP), to host the platform in the period immediately before and after the election. These operational details demonstrate that the barriers to entry for constructing crowd-sourced election-monitoring platform are quite low. For this reason, among others, we are likely to see many more popular election monitoring efforts in future elections.

MyFairElection.com allowed users to rate their voting experience. After voting (either by mail or at a polling location), individuals could file a report containing: (1) the location of their polling place; (2) experiences of typical problems such as long lines, broken voting machines, or lack of ballots; (3) positive experiences such as short waits or accessible polling locations; (4) a general rating of their experience, from one to five stars; (5) other comments; and (6) photos. Figure 9.2 presents this simple rating form.

The MyFairElection.com platform aggregated and then displayed the data through a Google Maps mash-up. We thought that the most familiar and therefore accessible kind of data display would be a geographic “heat map,” analogous to the ubiquitous weather map. Individual rankings of experiences (one to five stars, per individual) were thus aggregated up to the state level and displayed on an interactive map. On this web page (Figure 9.3), a user could click on any state to see the number of ratings and their average.

The map also allowed users to select any particular state and see ratings at the county level (Figure 9.4).

Finally, users could click on a county and view all of the reports for that county (Figure 9.5). There were two critical design choices in the initial conceptualization of MyFairElection. First, almost all of the other popular election-monitoring platforms collected only problem reports rather than good voting experiences as well. There are two reasons to collect good as well as bad experiences. First, if the data from MyFairElection are any indication of the reality of voting in the United States, the vast majority of voters experience the process as quite satisfactory. A monitoring system (or at least some monitoring systems) should reflect this reality. Second, less controversially, collecting only problems makes it quite difficult to compare polling places, counties, or even states to one another. The OurVoteLive map colored places according to the number of problem reports that they received. But the total number of problem reports will likely correlate to the population of a place; thus, the most “red” states on the OurVoteLiveMap were New York and California. The CNN map colored places according to the number of problem reports divided by

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Address (if known):  **Where was your poll located?**  
Country:   
City, State, Zip:

Which of the following problems did you experience?

- Long lines (more than 2 hour wait)
- Long lines (1–2 hour wait)
- Long lines (30 min–1 hour wait)
- Long lines (15–30 minute wait)
- Poll place hard to find
- No parking at poll place
- Someone (3rd party) challenged my right to vote
- My name wasn't on registration list
- Poll workers did not verify voter identities
- I was told that I had improper ID
- They ran out of ballots
- Ballots were confusing
- Voting machines were broken
- Voting machines didn't record my vote correctly
- Poll workers were confused or incompetent
- Unable to cast vote

Which of the following positive experiences did you have?

- Poll workers were courteous and friendly
- Wait was very short
- Poll place was easy to find
- Poll place was very accessible
- Poll workers solved my problems

How would you rate the polling station?

- Excellent ★★★★★
- Good ★★★★
- Fair ★★★
- Difficult ★★
- Terrible ★

Any general comments?

If you took any photographs, please share them with us

no file selected  
photo caption:   
Take more than one photo? [Add another](#)

FIGURE 9.2. MyFairElection.com Rating Form

population. Still, the difficulty with that index is that the number of calls is always a tiny percentage of population (nationwide, CNN reports 8,220 calls for registration problems, out of some 150 million voters). That aggregate figure is likely to be much “noisier” than individual rankings.



FIGURE 9.3. National Heat Map of Electoral Ratings

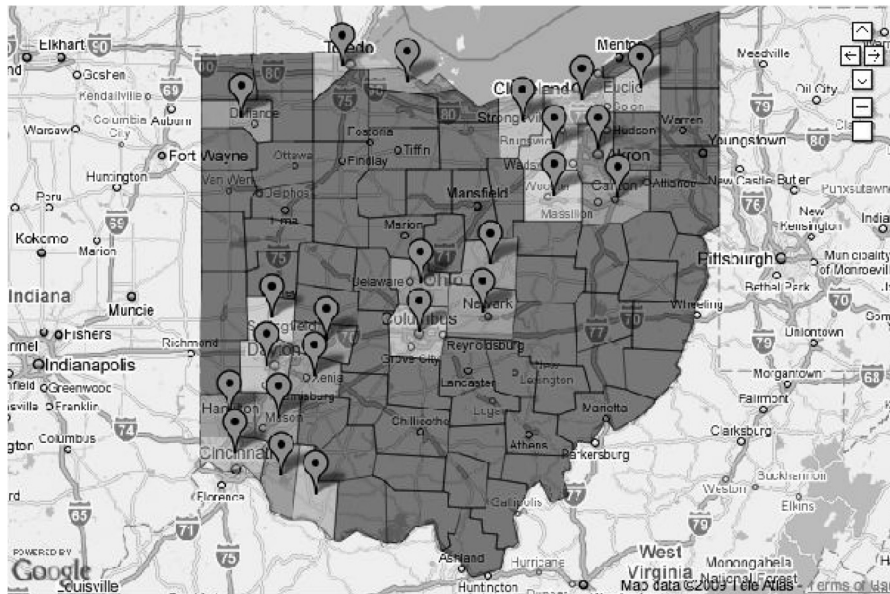


FIGURE 9.4. State Level Map for Ohio

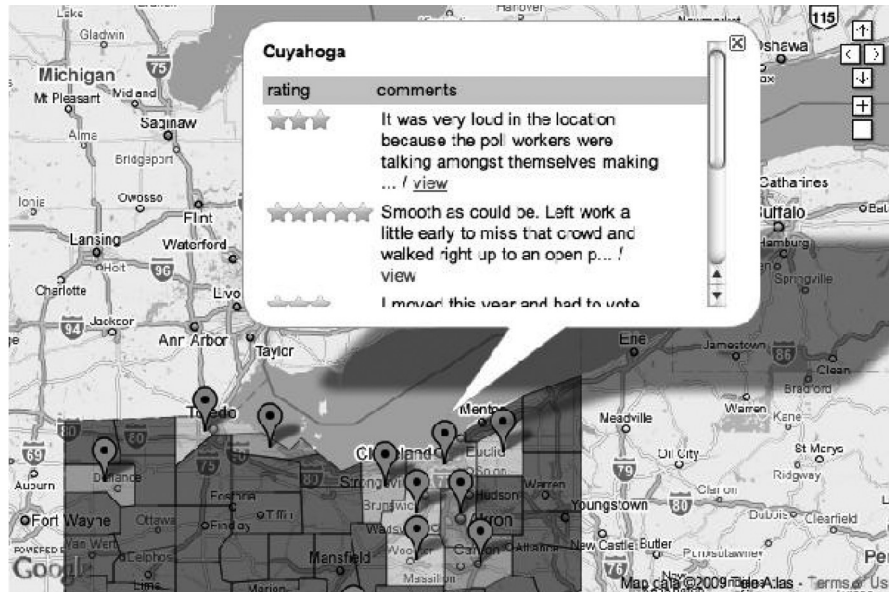


FIGURE 9.5. County level reports for Cuyahoga county

The second important design choice was to display the data in an aggregated heatmap. Several popular election-monitoring projects chose this path – such as CNN and OurVoteLive. The TwitterVoteReport project chose instead to display a map with a moving window of live reports that were cluster-mapped (Figure 9.6). These display alternatives merit a sustained discussion among platform designers and users



FIGURE 9.6. TwitterVoteReport data display



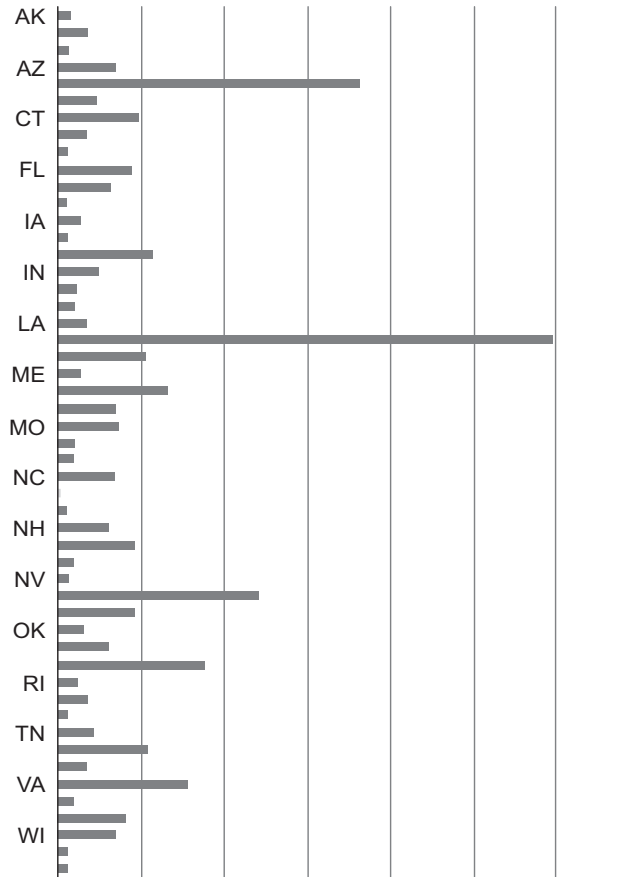
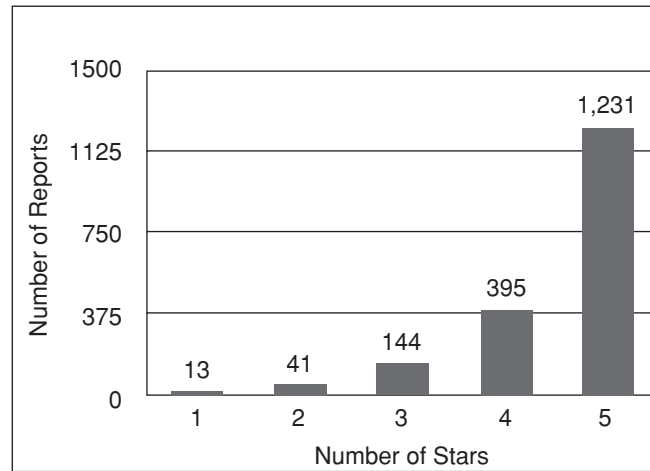


FIGURE 9.7. Number of Reports by State

about the comprehensibility and other advantages of the available options. In 2008, most of us were simply struggling to get a reasonable platform up and running.

#### OUTREACH AND USAGE

The success of popular election monitoring depends on substantial participation ~~in these platforms~~. The relatively greater participation in the CNN project is probably attributable to that mass media organization's publicity powers and to the use of telephone rather than web technology. Projects like MyFairElection would benefit from major media partners in the future to compliment the publicity efforts through social networks (such as Facebook) and occasional press coverage. MyFairElection was developed in partnership with ABC News as just such a media partner. However, doubts within the news organization about the reliability of crowd-sourced



	Yes	Percent
Poll workers courteous and friendly	1,527	83.72
Wait was short	1,152	63.16
Easy to find poll place	1,503	82.40
Poll place accessible	1,390	76.21
Poll workers solved my problems	388	21.27

FIGURE 9.8. Frequency Distribution of Vote Ratings

information created a reluctance to promote the effort. NPR featured and promoted the TwitterVoteReport effort ~~on its sight~~. This divergence indicates uncertainty on the part of professional journalists regarding the place of this new, technologically enabled method in particular and of citizen journalism more broadly.

Nevertheless, as a prototype and proof of concept, MyFairElection.com did receive substantial usage. Over the life of the site, it has received 17,571 visits, of which 9,369 occurred on Election Day. The vast majority – 14,920 visits – occurred in the days surrounding the election, between October 24, 2008 and November 24, 2009.

Over the life of the site, 1,824 voting experience reports were filed. As Figure 9.7 shows, the distribution of reports was nonrandom. A disproportionately high number of reports came from Massachusetts, probably due to awareness flowing through this author’s social networks.

## RESULTS

Overall, people reported being highly satisfied with their voting experiences. As Figure 9.8 below shows, 89 percent of users rated their voting experience as four

	Yes	Percent
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<b>Easy to find poll place</b>	1,503	82.40
<b>Poll place accessible</b>	1,390	76.21
<b>Poll workers solved my problems</b>	388	21.27

FIGURE 9.9. Good Experiences

(395 reports) or five (1,231 reports) stars, whereas slightly less than 3 percent of users reported having one- or two-star voting experiences. A star rating is highly subjective, and we offered little guidance regarding what would count as a one-star or five-star experience. But we also asked users to report whether they had particularly good experiences or encountered specific problems in the course of trying to vote.

Most respondents reported positive experiences at their polls, such as courteous poll workers, short waits, and easy-to-find polling places (Figure 9.9). However, a substantial minority of respondents reported encountering specific problems at the polls. As Figure 9.10 indicates, the most common problems were lines. Twenty percent of respondents reported encountering waiting lines between fifteen minutes and one hour. The third most commonly reported problem was that poll workers did *not* verify identities as required by law. Fortunately, some of the more severe problems – such as names not on registration lists, third-party challenges, and generally the inability to cast a vote – were encountered less frequently.

The frequency of problems is one measure of the adequacy of a voting system. Quite a different measure is the severity of those problems. MyFairElection.com

	Number “Yes”	Percent
<b>Lines 15–30 minutes</b>	189	10.36
<b>Lines 30 minutes - 1 hour</b>	184	10.09
<b>Did not verify my identity</b>	164	8.99
<b>Lines 1–2 hours</b>	135	7.4
<b>No parking at poll place</b>	103	5.65
<b>Lines 2+ hours</b>	42	2.3
<b>Ballot confusing</b>	39	2.14
<b>Voting machines broken</b>	32	1.75
<b>Poll place hard to find</b>	27	1.48
<b>Name not on registration list</b>	27	1.48
<b>Improper ID</b>	8	0.44
<b>Machine did not record my vote</b>	7	0.38
<b>Unable to cast vote</b>	5	0.27
<b>Right to vote challenged</b>	4	0.22
<b>Ran out of ballots</b>	2	0.11

FIGURE 9.10. Specific Problems

	Rating of those who encountered problem	Rating of those who did not	Difference	Number Reporting Problem	Percent of Reports
Unable to cast vote	1.00	4.54	3.54	5	0.27
Right to vote challenged	2.00	4.53	2.53	4	0.22
Improper ID	2.75	4.53	1.78	8	0.44
Lines 2+ hours	3.00	4.50	1.50	42	2.30
Voting machines broken	3.28	4.55	1.27	32	1.75
Name not on registration list	3.40	4.53	1.13	27	1.48
Machine did not record my vote	3.42	4.53	1.11	7	0.38
Ballot confusing	3.66	4.50	0.84	39	2.14
Poll place hard to find	3.74	4.50	0.76	27	1.48
Lines 1–2 hours	3.88	4.58	0.70	135	7.40
No parking at poll place	3.95	4.56	0.61	103	5.65
Ran out of ballots	4.00	4.53	0.53	2	0.11
Did not verify my identity	4.11	4.57	0.46	164	8.99
Lines, 30 mins – 1 hour	4.16	4.57	0.41	184	10.09
Lines 15–30 mins	4.39	4.55	0.16	189	10.36

FIGURE 9.11. Mean Satisfaction for Those Experiencing Problems

data captures the subjective severity of a problem in its star rankings of voting experience satisfaction. A rough measure of the severity of a problem is the difference in satisfaction between those who report that they encountered a particular problem and those who did not. These differences in satisfaction are reported in Figure 9.11.<sup>13</sup> The table is sorted in such a way as to have the problems causing the greatest dissatisfaction appear at the top and less severe problems at the bottom. Note that all differences in means are quite significant statistically. For all the problems encountered, the probability of the mean value of satisfaction for those encountering the problem being equal to or greater than for those not encountering the problem is less than 0.005 using two-sample t-tests.

Only five people (one-third of 1 percent) reported being completely unable to cast their vote; unsurprisingly, all five rated their experience as low as possible – one star. Four people reported that their right to vote was challenged, and they rated their voting experience two and a half stars below those who did not report being challenged. Those who waited in line for more than two hours rated their voting experience less than one and half stars below those who did not wait as long. Interestingly, those who had to wait from fifteen minutes to one hour reported being less satisfied than those who did not report such waits, but only slightly so.

#### COMPARING STATES

As a proof-of-concept project, MyFairElection.com did not receive sufficient usage to allow meaningful state-by-state comparisons. With a larger number of user reports, however, such comparisons would be possible and informative. Such comparisons cut against the fundamental impulse of many election reformers who seek to impose

uniform standards everywhere. These comparisons are “experimentalist” in that they treat states as literal laboratories of democracy.<sup>14</sup> Rather than presuming to know the most effective or just method of administering elections, Popular Election Monitoring makes possible empirical comparison of varied experiences from across the country in order to ascertain which practices actually create efficient, equitable, and satisfying elections. Such rankings might thus help feed projects like Heather Gerken’s democracy index.

#### CHALLENGES TO POPULAR ELECTION MONITORING

Though promising, platforms that were deployed in the 2008 U.S. elections were but a beginning. None of them achieved the ambitious potential outlined earlier in the chapter. Future elections will certainly be accompanied by many forms of technologically enabled popular election monitoring. Hopefully, research can help future efforts address some of the main challenges facing popular election monitoring: participation bias, gaming, constructive comparison, and integration with regulatory and news organizations.

#### PARTICIPATION BIAS AND OUTREACH BIAS

Almost certainly, 2008 popular election-monitoring platforms were much more widely used by some population groups – the more affluent, better educated, computer savvy, socially connected – than others. Future research should seek to establish the extent and character of this participation bias. Though there is a premium on short forms and data submissions (otherwise considerably fewer people would participate), a social-science component might be incorporated whereby a certain percentage of users is asked to complete an extensive demographic survey to determine the character of users, among other things.

Popular election-monitoring platforms should also investigate methods and designs – including the use of mobile phones, text messaging, call centers, and interactive voice mail – that may increase the engagement of underrepresented groups.

#### SIGNAL-TO-NOISE, SPOILING

Every crowd-sourced or collaborative production effort faces problems of noise from low-quality reports and spoiling from those who intentionally submit erroneous or irrelevant reports. In the future, those who develop popular election-monitoring platforms should coordinate their efforts with more traditional survey researchers to assess the extent to which noisy reports and spoilers create a picture of the election that is substantially different from that created through more conventional methods. We do not know what the underlying signal-to-noise ratio is for popular election-monitoring methods, but we should endeavor to find out. Second, popular election

monitors should develop and share methods to increase the quality of reports and so improve signal-to-noise ratios.

Such measures should assure data quality without erecting undue barriers to participation. Systems might create two tiers of users – with the first tier consisting of trained election monitors – which will allow users to see just reports from quasi-professional monitors, if they like (i.e., reports will allow second-tier user data to be filtered out). An open research question is whether the reports of first- and second-tier monitors will be materially different. Registration systems – requiring users to provide an email address – will deter some portion of spammers. Popular election monitoring platforms might also employ real-time human moderation and filtering, as well as systems that allow users to mark other comments as offensive or extraneous. Finally, those who use the data should be able to audit it post hoc to search for indications of spamming, such as multiple posts from the same user or IP address in short time periods.

#### GOAL: DEPICTING THE ELECTION OR IDENTIFYING PROBLEMS?

One central question for those who build popular election-monitoring platforms is whether such efforts should aim to identify problems only – and so whether users should only report negative experiences – or whether they should also report positive experiences and rate their voting experience overall. Different organizations and developers will choose different goals, depending on their missions and agendas.

Most of the 2008 projects collected problem reports rather than overall experiences. The main reason to focus on problems is to heighten public attention on the voting system's defects. This focus is also appropriate for those who focus mainly – or solely – on addressing obstacles to voting in real time.

One of the advantages of the MyFairElection approach, which allows users to report good as well as bad experiences, is that it allows more direct comparison across counties and states and subsequent benchmarking. Second, it creates a more comprehensive depiction of how Americans experience their elections. As millions of Americans express what they like and dislike about their elections, one research task will be to understand their subjective priorities. We may find that there is a gap between voters' priorities and those of policy makers and voting-rights lawyers.

#### ORGANIZATIONAL SYNERGIES: COMPETITION, COORDINATION, AND MEDIA

The quality of election monitoring and effect of that monitoring on the integrity of the electoral machinery results from complex formal and informal interactions between many entities including federal and state regulators, individuals who staff polling places, political campaign organizations, individual journalists, mass and

new media organizations, fair-voting advocacy groups, and ordinary voters who pull “fire alarms” when they witness voting problems.

One important general question, therefore, is how various popular monitoring efforts should relate to each other and to these various civic, campaign, advocacy, journalistic, and governmental entities. To date, the relationship has been ad hoc. Popular election-monitoring projects have developed in such short time frames that the imperative of developers has been to get systems up and running and get the word out rather than to develop the more complex set of relationships that would maximize the salutary impact of popular election monitoring.

The continuation of this trajectory – letting a thousand flowers bloom, so to speak – is one possible future. In this scenario, various election-monitoring projects would continue to evolve in informal competition with one another. Some would develop ad hoc partnerships with media organizations and others would be projects of media organizations (such as the CNN hotline). There would be little relation to election administrators and regulators.

This scenario would constrain the benefits of popular election monitoring in two ways. First, different projects would compete for users. The success of a popular election-monitoring program depends in large measure on having a very large user base. In the competitive scenario, each organization competes for a fixed base of voters who are willing to file reports. The second problem is that these efforts may remain disconnected from organizations who have the short-term (deploy lawyers and other staff to fix voting problems as they appear) and long-term (reform voting practices) capabilities to improve our voting system.

A second possible future is for separate projects to combine forces in an attempt to create One Big Project in popular election monitoring. Such a project might be sponsored and organized by a new organization, a civic coalition, or even a governmental body such as the Federal Election Commission (FEC). The difficulty with this trajectory is that it would stifle innovation. There are many design choices (about data collection, display, input methods, etc.) and many more implementation strategies. There is no right answer, and compelling platforms will be the product of innovation. Innovation occurs more quickly when there are parallel ~~and independent~~ efforts aiming toward the same general end.

A third possible future is for these independent efforts to create common standards that allow them to share user data with one another. Think of this possibility as the second-order pooling of crowd-sourced data. So, various popular election-monitoring platforms should create data feeds that allow anonymized reports (ratings, specific problems, comments, photos, geo-codes, etc.) to be used by other developers. This way, popular election-monitoring effort could both use data from other projects and create its own channels of recruiting and publicity, methods of data input, moderation and filtering, displays, and analysis. If each of these efforts treated its own user reports as a public good, popular election monitoring efforts in future presidential elections could easily draw hundreds of thousands of reports.

Advocacy and democracy reform organizations could create monitoring platforms that tap into these data streams to pick out their variables of interest (only this state, only problem reports and not good reports, only reports from these sources but not others, etc.), which will differ depending on the agency. Regulators would gain an enormous amount of information about election conditions that they would not otherwise possess.

Mass and new media organizations should themselves create popular election-monitoring platforms and publicize them to their audiences. This trajectory would of course require two changes in the culture of professional journalism. First, these organizations would have to recognize the power of crowd-sourced, citizen-generated information and its contribution to their social mission of helping Americans understand their political reality. Second, these organizations would have to relax their proprietary impulses and realize that they themselves stand to gain by pooling the reports they gather.

There is little doubt that the future will bring more, perhaps many more, popular election-monitoring projects in the United States and abroad. One important task is to improve the quality of these projects and knit them together so, combined with election officials and journalists, they contribute to the fairness and integrity of electoral systems everywhere.

#### NOTES

- 1 I would like to thank Russell Richardson for his generous, tireless, and incredibly talented efforts to develop MyFairElection.com from a crude idea into an elegant software platform. It still boggles my mind that someone could make sushi by day, do software engineering by night, and move so far in so few nights. Reynolds Holding and Elizabeth Tribolet of ABC News supported MyFairElection.com from the beginning; they get it. Toshiro Sugihara and Ginny Hunt of Google.com and Conor Kenny at the Center for Media and Democracy provided critical advice, support, and connections that made MyFairElection.com possible. Finally, the project benefitted from the sage advice of Joshua Cohen (Stanford), Heather Gerkin (Yale), Jonah Goldman (Lawyers Committee for Civil Rights), and David Dill (Stanford). Jerry Cohen and Robert Plotkin covered our legal backs, and they did it for free! No more lawyer jokes from me.
- 2 See [amazon.com](http://amazon.com), [imdb.com](http://imdb.com), [tripadvisor.com](http://tripadvisor.com), [patientslikeme.com](http://patientslikeme.com), and [epinion.com](http://epinion.com).
- 3 See <http://www.stateofthebirds.org/>, accessed January 8, 2010.
- 4 See <http://www.google.org/flutrends/>, accessed January 8, 2010.
- 5 For a visual demonstration, see: <http://www.google.org/flutrends/about/how.html>, accessed January 8, 2010.
- 6 “Ushahidi” means “testimony” in Swahili. See <http://www.usahidi.com/>, accessed January 21, 2010.
- 7 See <http://www.fixmystreet.com/> and <http://www.seeclixfix.com/>, both accessed January 21, 2010, and <http://www.citysourced.com/>, accessed May 15, 2010.
- 8 There is a third reason to pursue PEM in developing-country contexts. It is cheap, and there may be no other way to establish comparable levels of monitoring.



- 9 <http://blog.twittervotereport.com/>.
- 10 <http://www.cnn.com/ELECTION/2008/voter.hotline/>.
- 11 <http://www.ourvoteline.org/home.php>.
- 12 <http://www.myfairelection.com/>.
- 13 Note that the figures reported below are uncontrolled bivariate tabulations. This discussion does not contain multivariate analysis.
- 14 Dorf, Michael C., and Charles F. Sabel. "A Constitution of Democratic Experimentalism." *Columbia Law Review* 98.2 (1998): 267–473.