



Democracy in the 21st Century

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If you are anything like Santiago Siri, the act of voting may leave you feeling a bit unsatisfied. In the age of the Internet, you might wonder why we still slog to polling stations to cast our ballots. After some thought, you may begin to question the need for elections in the first place. If government is truly of, by, and for the people, why is the role of the average citizen confined to selecting representatives every two, four, or six years? Through technology, why can't ordinary civilians play an active part in setting the agenda, debating policy options, and making the decisions that affect their lives? Yes, if you are anything like Santiago Siri, the whole system may seem due for a massive update.

From Buenos Aires to Silicon Valley

Siri, a computer programmer from Buenos Aires, believes that the Internet can not only make traditional voting easier but also create new venues for civic engagement. Unfortunately, in Argentina, as in the United States, such radical ideas are not readily adopted. So Siri devised a plan to demonstrate how an online platform could foster constructive conversation and help pinpoint the will of the people. In 2012, he founded *Partido de la Red* (The Net Party, PDR) with a Trojan horse as its symbol. The idea: sneak a tiny bit of direct democracy into the country's representative system.

The PDR has no official ideology or platform. Instead, its candidates commit to voting in accordance with the majority of users on its website. PDR provides an online forum for interested citizens to read legislation in simplified language and argue for or against its approval. Users then vote and PDR representatives are bound by the results.

In the 2013 Buenos Aires municipal election, PDR failed to garner sufficient support to win a seat in the city's legislature. Their efforts, however, did not go unnoticed. One appreciative observer was then-mayor Mauricio Macri—now the Argentinian President—who agreed to use online participation to determine three proposals on the legislative agenda. [i]

The victory was short lived. None of the selected proposals were approved in the lawmaking session. Moreover, throughout PDR's early existence, Siri faced consistent harassment from shady individuals with connections to government officials and other political parties. The breaking point came when Siri was asked to bribe a federal judge in order to ensure PDR's eligibility for the 2015 elections.

After the incident, Siri concluded that *Partido de la Red* was neither the best method nor in the best location to advance his dream of online direct democracy. Reflecting on much of the world's recent progress, Siri wrote, "The real revolution [hasn't] come from a bureaucracy that is over 200 years old," but rather from the "bits and bytes" that form the basis of the computer age.

Attempting to change the system from within was futile--better to focus on perfecting the tools that could make change possible when the system was ready.

Guided by this revelation, and aided by a grant from Y Combinator—a company that provides funds to early-stage startups —Siri took his vision for 21st Century democracy to the world capital of “bits and bytes”: Silicon Valley, California. In 2015, Siri founded Democracy Earth, a non-profit organization that designs software to enable decentralized governance within any organization.

For Siri and his team, identity verification and security are the characteristics that distinguish their product from online polls and surveys. Internet voting—already in use in British Columbia and Estonia—has been widely criticized for the security risks. When Washington D.C. invited hackers from the University of Michigan to test its online voting platform, the team was able to change every vote and reveal every secret ballot without detection. Professor J. Alex Halderman, who led the hackers, concluded, “it will be decades before Internet Voting is secure.” [ii] Such results offer a strong case to the opponents of online voting platforms, one that Siri and Democracy Earth must struggle to overcome.

Online Direct Democracy

If modern history has one lesson, however, it is that progress often comes faster than expected. Frequently, a wave of advances is spurred by a single breakthrough idea. For Siri and his Silicon Valley colleagues, this idea could be blockchain.

Blockchain is the basis for Bitcoin, a digital currency that allows for secure transfers without the need for a centralized authority. Each individual user has their own copy of Bitcoin’s “ledger,” which includes every account number and its corresponding balance. As transactions pass through the Bitcoin network, they are verified by mathematical formulas that use a “signature” to ensure the correct person is sending the money. Once verified, transactions are not complete until they are attached to the “blockchain”, an immutable sequence that keeps everyone’s ledger the same.

In traditional elections, Blockchain could eliminate voter fraud and remove the need for a centralized, and potentially corrupt, authority to enforce the rules. But the technology also holds the potential to revolutionize democracy altogether.

For instance, it can facilitate a governance model known as liquid democracy in which each citizen starts with a single vote on every issue. Citizens then delegate their votes on issues or issues areas (say economics) to a trusted friend or known expert in the field. Blockchain could permit secure and transparent delegation, just as it does for Bitcoin transfers.

Blockchain also has the potential to crack an age-old problem for democracy: how can voters express the intensity of their preferences? One solution is to offer citizens a basket of votes to spread across a number of different issues. Voters could then have a larger impact on the issues they feel most passionate about while forfeiting influence over those on which they are relatively indifferent. In an online liquid democracy, all citizens would have x number of votes added to their account which they could then delegate or use themselves across a range of issues.

Colombia's Digital Referendum

On October 2, Colombia held a popular referendum to approve or reject a peace agreement between the Revolutionary Armed Forces of Colombia (FARC) and the country's government, led by President Juan Manuel Santos. The agreement was narrowly defeated (50.2 percent to 49.8 percent) with turnout lower than 40 percent. The "No" Campaign's victory contradicted pollster's predictions and took the international community by surprise.

One group that was unable to participate was Colombia's sizeable diaspora (there are about 6 million Colombians living abroad), among whom opinion of the accord was largely favorable.¹ Democracy Earth's Digital Referendum aimed at giving voice to the country's expatriates while demoing innovations as vote allocation and delegation.

Thousands of participants were each given 100 votes to spread across seven different questions: one being the official referendum question and the others, the main pillars of the peace agreement. The results indicate that the referendum could have gone much differently had Colombians living outside the country been able to participate. Over 80% of the votes directed toward the official referendum question were affirmative.

The outcome also demonstrated how such a platform could offer insight into public opinion about the components of a complex law. One of the agreement's pillars was rejected by a 3 to 1 ratio: that which concerned the transition of the FARC to a political party with guaranteed seats in the legislature. Had this platform been employed prior to the referendum, it would have alerted Santos' government to the dangers that this particular provision posed to the entire agreement.

Other aspects of the Digital Referendum, however, reveal that Siri and like-minded activists still have work to do. One disappointment was the low number of votes delegated: just 1.3 percent. In another liquid democracy experiment—Google Votes—conducted on Google's corporate social media platform, less than four percent of votes were delegated. [iii] These examples demonstrate a need to actively promote delegation in future trials.

Another shortcoming was participation; the Digital Referendum reached only a couple thousand out of the millions of Colombian expats. Likewise, participants in Google's experiment represented just a fraction of the company's workforce. In this regard, online democracy is running into a Catch-22. It is difficult to increase participation when results do not affect policy. At the same time, current leaders are unlikely to consult the results of an online vote if only a small percentage of citizens participate.

Finally, there are concerns over the scalability of digital democracy platforms. Preventing vote buying and fostering a civil and fact-based debate with millions participants are just a few of the challenges that Democracy Earth faces as it expands into larger organizations and even countries.

It could be a long time before Siri can implement his ideas and software in his native Argentina. Digital democracy is contingent on widespread access to and familiarity with the Internet. Currently an online platform would be skewed toward younger, wealthier, and more urban populations. But, as Internet access expands and the millennial generation takes the reins of power, online liquid democracy may very well become the status quo. When Siri's vision

becomes a reality, the question then will be, “is it wise to put every issue before the masses?” We save this philosophical quandary for a later time.

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i “Macri, desagradecido: uso al Partido de la Red y luego lo margin de las elecciones.” *Letra P*, June 15 2015. Accessed November 8, 2016.

ii “Sari Horwitz, “More than 30 states offer online voting, but experts warn it isn’t secure,” *Washington Post*, May 17, 2016. Accessed November 7, 2016.

<https://www.washingtonpost.com/news/post-nation/wp/2016/05/17/more-than-30-states-offer-online-voting-but-experts-warn-it-isnt-secure/>

iii Google Vote Report.

iv Steve Hardt and Lia C. R. Lopes, “Google Votes: A Liquid Democracy Experiment on a Corporate Social Network,” *Technical Disclosure Commons*, June 5, 2015. Accessed November 3, 2016. http://www.tdcommons.org/cgi/viewcontent.cgi?article=1092&context=dpubs_series

v “A Digital Referendum for Colombia’s Diaspora,” *Democracy Earth*, October 4, 2016. Accessed November 3, 2016.